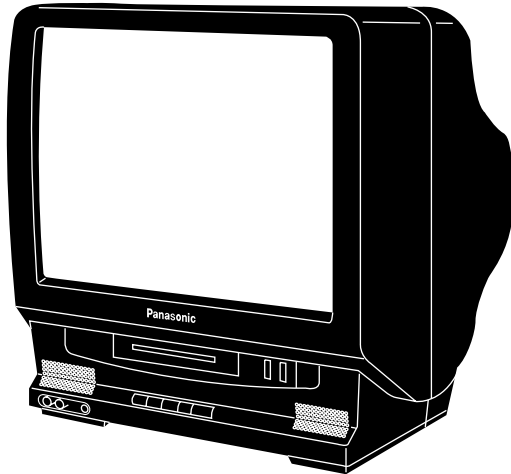


# Service Manual

Combination-VCR

Omnivision **VHS**



- P** PV-M1326/PV-M1326W
- Q** VV1306/VV1306B/VV1316W
- P** PV-M1346/PV-M1356W
- P** PV-M2036/PV-M2046
- Q** VV2006/VV2016W
- Q** VV2706

ITEM	SPECIFICATION	1	2	3	4	5	6	ITEM	SPECIFICATION	1	2	3	4	5	6	
VCR	Video	Head: 2 rotary heads helical scanning system	○	-	○	○	-	○	VCR	Tape Speed	SP: 1-5/16 i.p.s (33.35mm/sec), LP: 21/32 i.p.s (16.67mm/sec), SLP: 7/16 i.p.s (11.12mm/sec)	○	○	○	○	○
		Head: 4 rotary heads helical scanning system	-	○	-	-	-	Record/Playback Time: 8 Hrs with 160min. type tape used in SLP mode								
		Input Level: VIDEO IN Jack (Phono type) 1.0 Vp-p 75Ω unbalanced	○	○	○	○	○	○	FF/REW Time: Less than 5min. (120min. type tape)							
	Audio	Signal-to-Noise Ratio: SP: more than 43dB	○	○	○	○	○	○	DISPLAY	Picture Tube	13 inch measured diagonal 90° deflection	○	○	-	-	-
		LP/SLP: more than 41dB	○	○	○	○	○	○			20 inch measured diagonal 90° deflection	-	-	○	○	-
		Horizontal Resolution: Color/Monochrome: more than 230 lines	○	○	○	○	○	○	27 inch measured diagonal 100° deflection	-	-	-	-	○		
		Head: Normal Mono: 1 stationary head	○	○	○	○	○	○	GENERAL	Power	Source: 120V AC ± 10%, 60Hz ± 0.5%	○	○	○	○	○
		Input Level: AUDIO IN Jack (Phono type) - 10dBV 50kΩ unbalanced	○	○	○	○	○	○			Consumption: Approx. 69 watts (power on), Approx. 6 watts (power off)	○	○	-	-	-
	Frequency Response: Normal Mono: SP: 100Hz ~ 8kHz	○	○	○	○	○	○	Approx. 110 watts (power on), Approx. 6 watts (power off)			-	-	○	○	-	
	Tuner	Signal-to-Noise Ratio: Normal Mono: SP: more than 42dB	○	○	○	○	○	○	Approx. 157 watts (power on), Approx. 6 watts (power off)	-	-	-	-	○		
		LP/SLP: more than 40dB	○	○	○	○	○	○	Television System	EIA Standard (525 lines, 60 fields) NTSC Color Signal	○	○	○	○	○	
		Wow and Flutter: Normal Mono: SP: Less than 0.2% WRMS	○	○	○	○	○	○	Operating Condition	41°F(5°C) ~ 104°F(40°C) (Temperature)	○	○	○	○	○	
Tuner	LP: Less than 0.3% WRMS	○	○	○	○	○	○	Dimension	14-13/16"(376mm) (W) X 15-7/8"(403mm) (H) X 17"(432mm) (D)	○	○	-	-	-		
	SLP: Less than 0.4% WRMS	○	○	○	○	○	○	Weight	Approx. 28.0 lbs (12.7kg)	○	○	-	-	-		
	Broadcast Channels: VHF 2 ~ 13, UHF 14 ~ 69	○	○	○	○	○	○	Approx. 54.0 lbs (24.5kg)	-	-	○	○	-			
CATV Channels: Midband A through I (14 ~ 22)	○	○	○	○	○	○	Approx. 88.2 lbs (40.0kg)	-	-	-	-	○				
Superband J through W (23 ~ 36)	○	○	○	○	○	○										
Hyperband AA ~ EEE (37 ~ 64)	○	○	○	○	○	○										
Lowband A-5 ~ A-1 (95 ~ 99)	○	○	○	○	○	○										
Special CATV channel 5A (01)	○	○	○	○	○	○										
Ultraband 65 ~ 94, 100 ~ 125	○	○	○	○	○	○										

1. PV-M1326/PV-M1326W/VV1306/VV1306B/VV1316W
2. PV-M1346/PV-M1356W
3. PV-M2036
4. VV2006/VV2016W
5. PV-M2046
6. VV2706

Weight and dimensions shown are approximate. Specifications are subject to change without notice.

## ⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

Use the Marks (A, B, ...) shown in the chart below to distinguish the different models included in this Service Manual.

MODEL	MARK	MODEL	MARK
PV-M1326	A	PV-M2036	H
PV-M1326W	B	VV2006	I
VV1306	C	VV2016W	J
VV1306B	D	PV-M2046	K
VV1316W	E	VV2706	L
PV-M1346	F	NOT USED	Z
PV-M1356W	G		

MODEL	HEAD	TV STEREO	A/V JACK		REMOTE CONTROL PART NO.
			FRONT	REAR	
PV-M1326	2	—	○	—	VSQS1436
PV-M1326W	2	—	○	—	VSQS1437
VV1306	2	—	—	○	VSQS1404
VV1306B	2	—	—	○	VSQS1404
VV1316W	2	—	—	○	VSQS1409
PV-M1346	4	—	—	○	VSQS1440
PV-M1356W	4	—	—	○	VSQS1441
PV-M2036	2	—	○	—	VSQS1440
VV2006	2	—	—	○	VSQS1404
VV2016W	2	—	—	○	VSQS1409
PV-M2046	4	○	○	—	VSQS1443
VV2706	2	○	○	—	VSQS1438

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## IMPORTANT SAFETY NOTICE

There are special components used in this equipment which are important for safety. These parts are marked by ⚠ in the Schematic Diagrams, Circuit Board Diagrams, Exploded Views and Replacement Parts List. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent X-RADIATION, shock, fire or other hazards. Do not modify the original design without permission of manufacturer.

# SAFETY PRECAUTIONS

COMPARISON CHART OF MODELS AND MARKS

MODEL	MARK	MODEL	MARK
PV-M1326	A	PV-M1356W	G
PV-M1326W	B	PV-M2036	H
VV1306	C	VV2006	I
VV1306B	D	VV2016W	J
VV1316W	E	PV-M2046	K
PV-M1346	F	VV2706	L

## GENERAL GUIDELINES

1. It is advisable to insert an isolation transformer in the AC supply before servicing.
2. When servicing, observe the original lead dress, especially the lead dress in the high voltage circuits. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.
3. After servicing, see to it that all the protective devices such as insulation barriers, insulation papers, shield, and isolation R-C combinations are properly installed.
4. Before turning the receiver on, measure the resistance between B+ line and chassis ground. Connect (-) side of an ohmmeter to the B+ lines, and (+) side to chassis ground. Each line should have more resistance than specified, as follows :
 

B+ Line	Minimum Resistance
130V	1K ohm (Hot chassis ground)
27V	180 ohms (Cold chassis ground)
17V	110 ohms (Cold chassis ground)
5. When the TV set is not used for a long period of time, unplug the power cord from the AC outlet.
6. Potentials, as high as  $25.0\text{KV}$  : Model A,B,C,D,E,F,G or  $30.0\text{KV}$  : Model H,I,J,K or  $32.0\text{KV}$  : Model L (see chart above) are present when this TV set is in operation. Operation of the TV set without the rear cover involves the danger of a shock hazard from the TV set power supply. Servicing should not be attempted by anyone who is not thoroughly familiar with the precautions necessary when working on high voltage equipment. Always discharge the anode of the picture tube to the CRT ground of receiver before handling the tube.
7. After servicing make the following leakage current checks to prevent the customer from being exposed to shock hazards.

## LEAKAGE CURRENT COLD CHECK

1. Unplug the AC cord and connect a jumper between the two prongs on the plug.
2. For physically operated power switches, turn power on. Otherwise skip step 2.
3. Measure the resistance value, with an ohmmeter, between the jumpered AC plug and each exposed metallic cabinet part on the receiver, such as screwheads, connectors, etc. When the exposed metallic part has a return path to the chassis, the reading should be between 1 M ohm and 12 M ohms. When the exposed metal does not have a return path to the chassis, the reading must be  $\infty$ .

## LEAKAGE CURRENT HOT CHECK (See Figure 1)

1. Plug the AC cord directly into the AC outlet.  
Do not use a isolation transformer for this check.
2. Connect a 1.5K ohms, 10 watts resistor, in parallel with a  $0.15\mu\text{F}$  capacitor, between each exposed metallic part on the set and a good earth ground such as a water pipe, as shown in Figure 1.
3. Use an AC voltmeter, with 1000 ohms/volt or more sensitivity, to measure the potential across the resistor.
4. Check each exposed metallic part, and measure the voltage at each point.
5. Reverse the AC plug in the AC outlet and repeat each of the above measurements.
6. The potential at any point should not exceed 0.75 volt RMS.  
A leakage current tester (Simpson Model 229 equivalent) may be used to make the hot checks, leakage current must not exceed 1/2 milliamp. In case a measurement is outside of the limits specified, there is a possibility of shock hazard, and the receiver should be repaired and rechecked before it is returned to the customer.

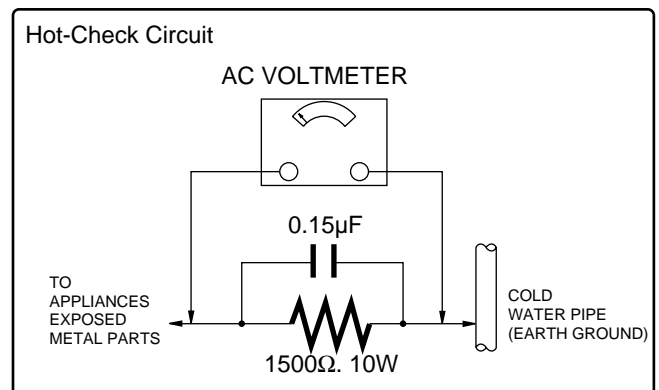


Figure 1

# PREVENTION OF ELECTRO STATIC DISCHARGE (ESD) TO ELECTROSTATICALLY SENSITIVE (ES) DEVICES

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistors are semiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by electro static discharge (ESD).

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any ESD on your body touching a known earth ground. Alternatively, obtain and wear a commercially available discharging ESD wrist strap, which should be removed for potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
4. Use only an anti-static solder removal device. Some solder removal devices not classified as "anti-static (ESD protected)" can generate electrical charge sufficient to damage ES devices.
5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material).
7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.

## CAUTION :

Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.

8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity (ESD) sufficient to damage an ES device).

"NOTE to CATV system installer :

This reminder is provided to call the CATV system installer's attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical."

Model : K

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# X-RADIATION

## WARNING :

1. The potential source of X-Radiation in TV sets is the High Voltage section and the picture tube.
2. When using a picture tube test fixture for service, ensure that the fixture is capable of handling  $25.0\text{KV}$  : Model A,B,C,D,E,F,G or  $30.0\text{KV}$  : Model H,I,J,K or  $32.0\text{KV}$  : Model L (see chart, Page 1-1) without causing X-Radiation.

## NOTE :

It is important to use an accurate periodically calibrated high voltage meter.

1. Reduce the brightness to minimum.
2. Set the SERVICE switch to SERVICE .
3. Measure the High Voltage. The meter reading should indicate  $23.5\pm 1.5\text{KV}$  : Model A,B,C,D,E,F,G or  $28.5\pm 1.5\text{KV}$  : Model H,I,J,K or  $30.0\pm 2.0\text{KV}$  : Model L (see chart, Page 1-1).  
If the meter indication is out of tolerance, immediate service and correction is required to prevent the possibility of premature component failure.
4. To prevent an X-Radiation possibly, it is essential to use the specified picture tube.

## HORIZONTAL OSCILLATOR DISABLE CIRCUIT TEST

### SERVICE WARNING :

The test must be made as a final check before set is returned to the customer.

1. With the rear cover removed, supply about a 120V AC power source to the set, turn on the set.
2. Set the customer controls to normal operating positions.
3. Short between TP91 and TP92 on the Main circuit board with a jumper wire. Confirm that the picture goes out of horizontal sync.
4. If this does not occur, the horizontal oscillator disable circuit is not operating. Follow the Repair Procedures of horizontal oscillator disable circuit before the set is returned to customer.

## REPAIR PROCEDURES OF HORIZONTAL OSCILLATOR DISABLE CIRCUIT

1. Connect a DC voltmeter between capacitor C555 (+) on the Main circuit board and chassis ground.
2. If approximately +21.9V is not present at that point when 120V AC is applied, find the cause. Check R515, R5505, R5507, C555 and D554.
3. Carefully check above specified parts and related circuits and parts. When the circuit is repaired, try the horizontal oscillator disable circuit test again.

## CIRCUIT EXPLANATION

### HORIZONTAL OSCILLATOR DISABLE CIRCUIT

The positive DC voltage, supplied from the D554 cathode for monitoring high voltage, is applied to the IC5301 Pin11 through R515 and R5504. Under normal conditions, the voltage at IC5301 Pin11 is less than approx 3V. If the high voltage at Flyback Tr Pin 5 exceeds the specified voltage, the positive DC voltage which is supplied from the D554 cathode also increases. The increased voltage is applied to IC5301 Pin11 through R515 and R5504. Due to the increased voltage at IC5301 Pin11, the horizontal oscillator frequency increases, the picture goes out of horizontal sync, the beam current decreases and the picture becomes dark in order to keep X-radiation under specification.

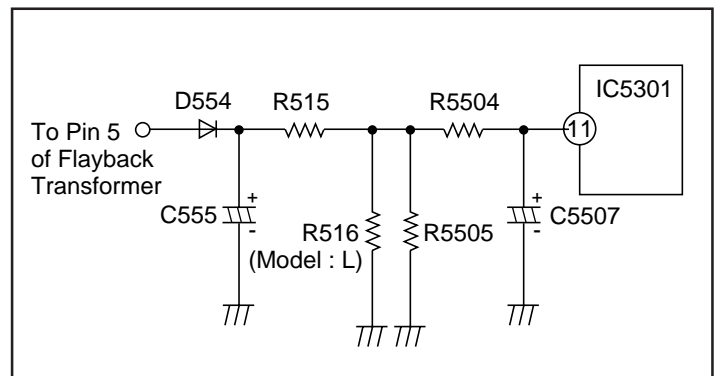


Figure 2

## II. ADJUSTMENT PROCEDURES

### A. MECHANICAL ADJUSTMENT PROCEDURES

#### 1-1. DISASSEMBLY OF CABINET PARTS

Model : A,B,C,D,E,F,G,H,I,J,K

#### DISASSEMBLY FLOWCHART

This flowchart indicates the disassembly steps of the cabinet parts and the P.C. Boards in order to gain access to the item(s) to be serviced. When reassembling, perform the step(s) in the reverse order.

**Caution : Disconnect AC Plug before disassembly.**

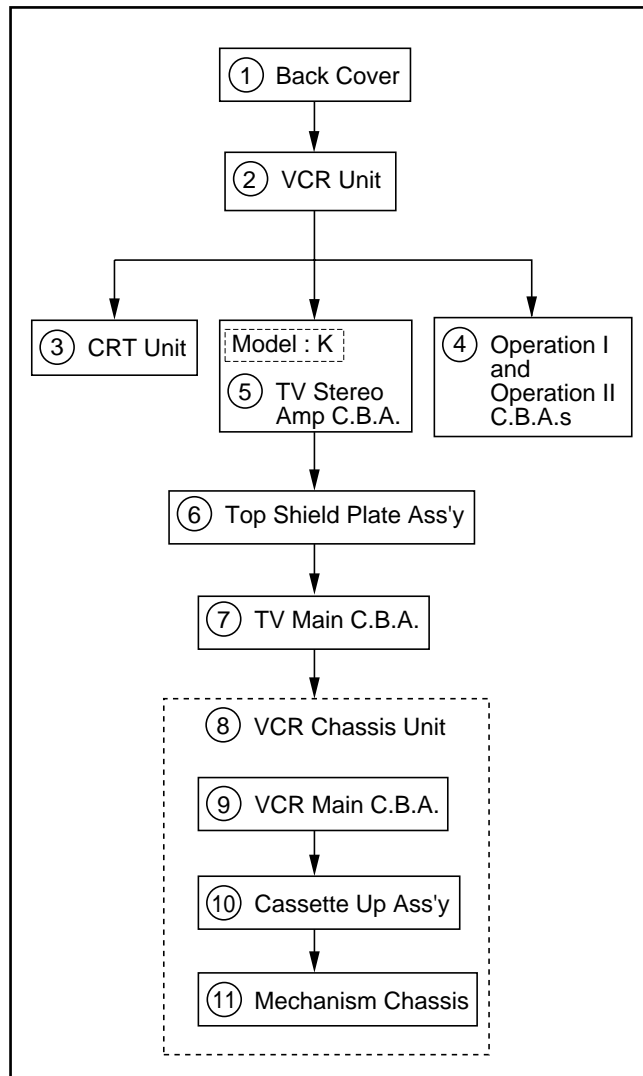


Fig. D1

#### DISASSEMBLY METHOD

Step /Loc. No.	Part	Fig. No.	Remove	Note
①	Back Cover	D2-1 D2-2	7(S-1)	-
②	VCR Unit	D3, D4	P354, Anode Cap, P3004(Model : H,K), P4152(Model : A,B,C,D,E,F G,H,I,J), P4153(Model : H) P4903 P4905(Model : K), P4904(Model : K), CRT C.B.A., Deflection Yoke Connector, Degaussing Coil Connector	1
③	CRT Unit	D3	4(S-2)	2
④	Operation I and Operation II C.B.A.s	D5	P3004 P4153(Model : A,B), P6001, 6(L-1)	-
⑤	Model : K TV Stereo Amp C.B.A.	D6	P4902, P4001, Clamper	-
⑥	Top Shield Plate Ass'y	D6	5(S-3)	-
⑦	TV Main C.B.A.	D7	P201, P202, P203, P801, 4(L-2)	3
⑧	VCR Chassis Unit	D8	2(S-4), (S-5), (S-6) Chassis Angle, (L-3)	4
⑨	VCR Main C.B.A.	D9	(S-7), (S-8), P6002 P2501, P3501	-
⑩	Cassette Up Ass'y	D10	2(S-9), 2(S-10)	5
⑪	Mechanism Chassis	D10	-----	6

↑ A                      ↑ B                      ↑ C                      ↑ D

**How to read chart shown above :**

- ① : Order of steps in Procedure  
When reassembling, perform the step(s) in the reverse order.  
These numbers are also used as the identification (location) No. of parts in Figures.
- ② : Part to be removed or installed.
- ③ : Fig. No. showing Procedure or Part Location.
- ④ : Identification of part to be removed, unhooked, unlocked, released, unplugged, unclamped, or unsoldered.  
2(S-1)=2 Screws(S-1);    3(L-1)=3 Locking Tabs(L-1)

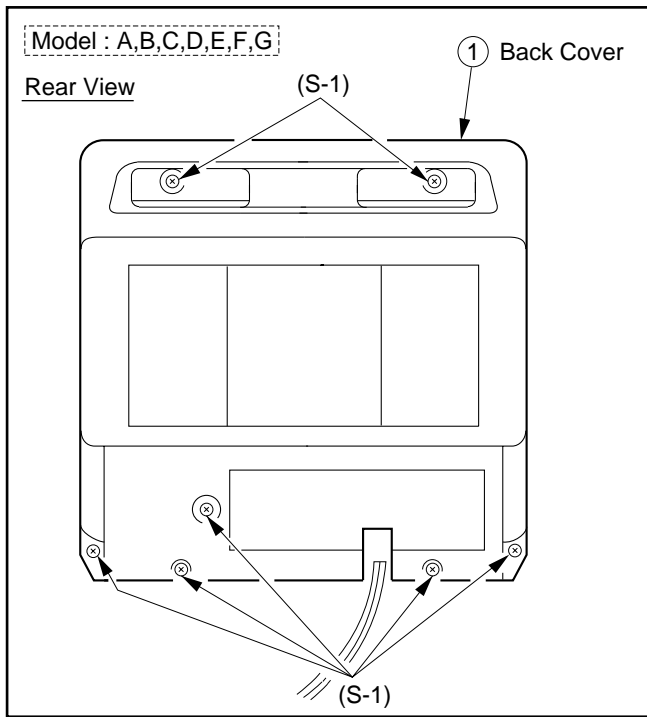


Fig. D2-1

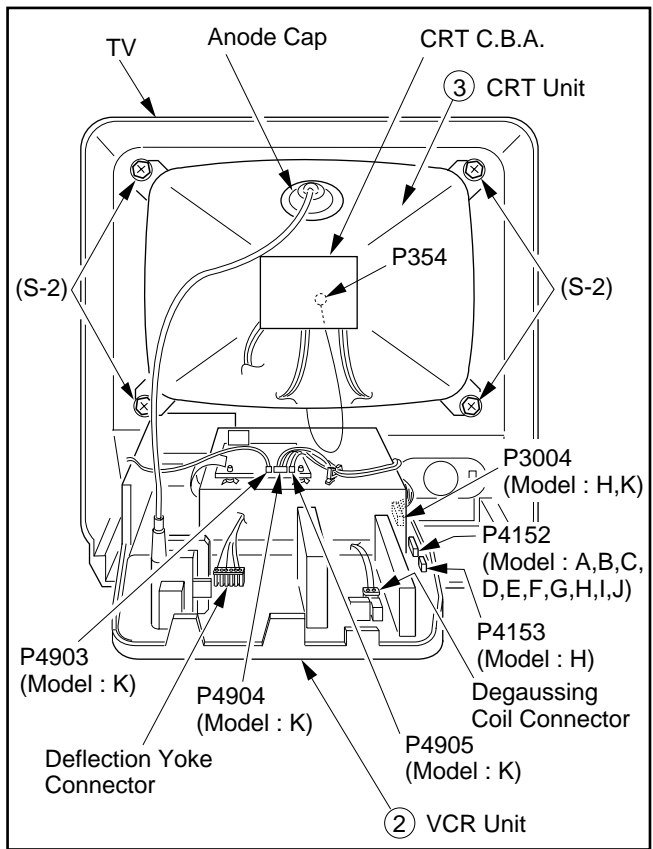


Fig. D3

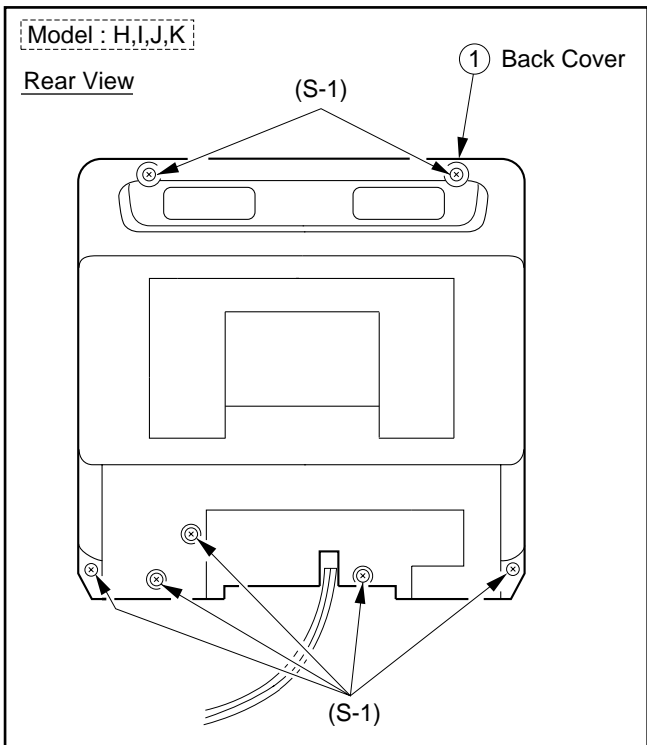


Fig. D2-2

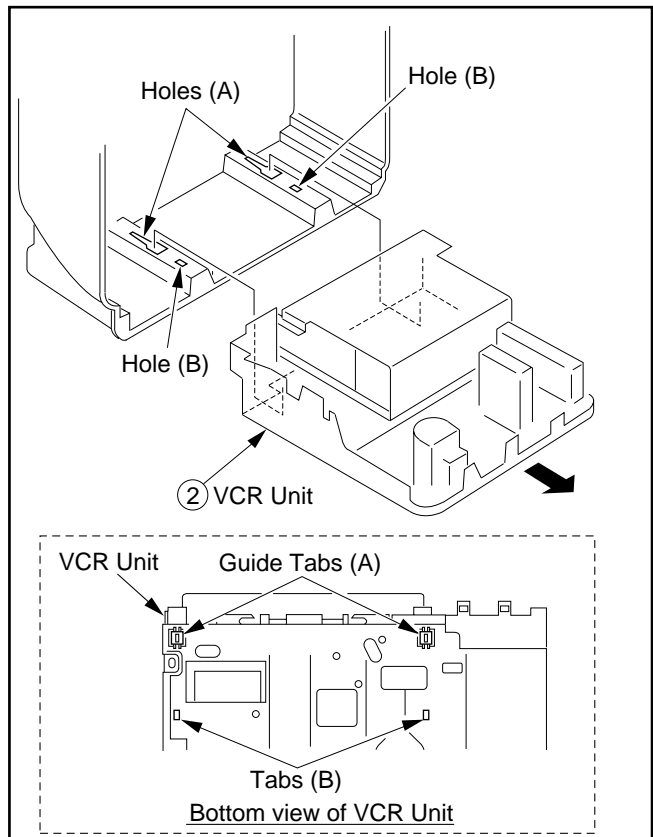


Fig. D4

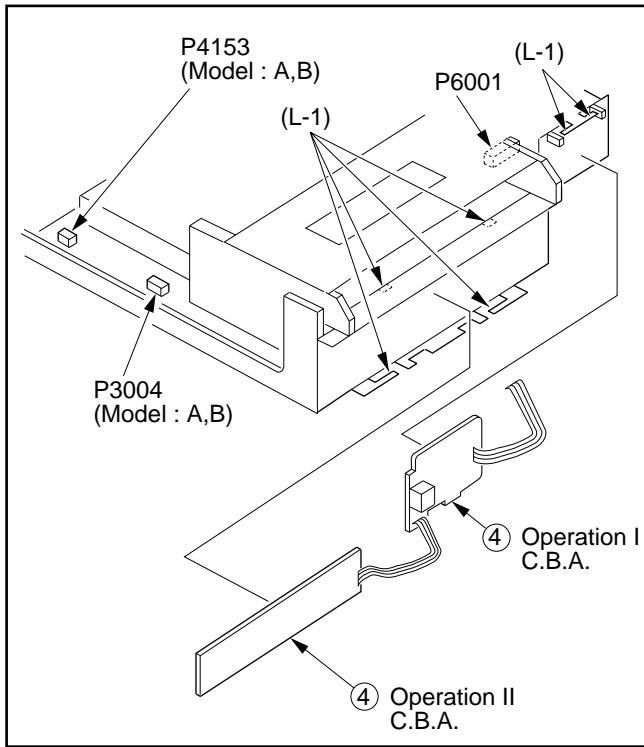


Fig. D5

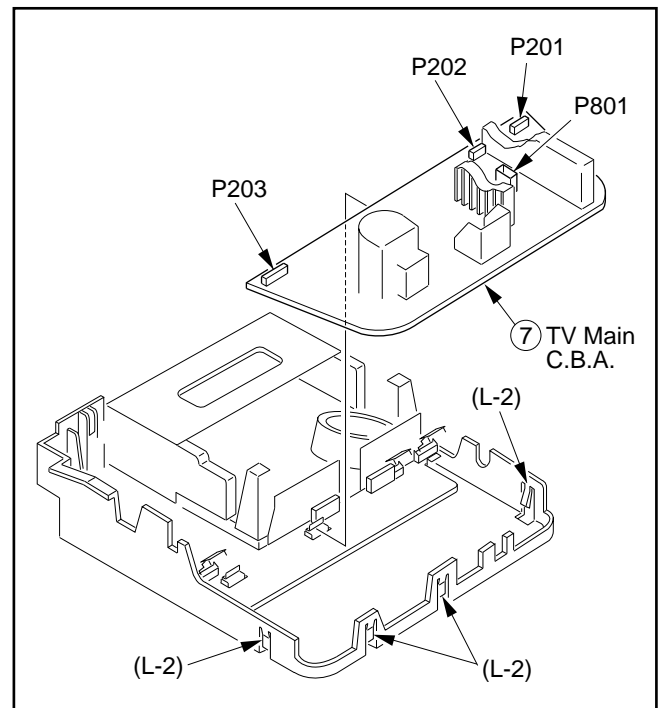


Fig. D7

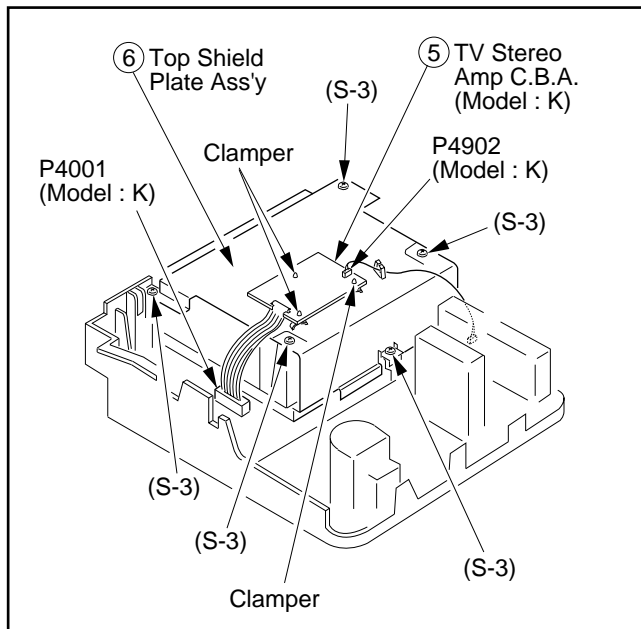


Fig. D6

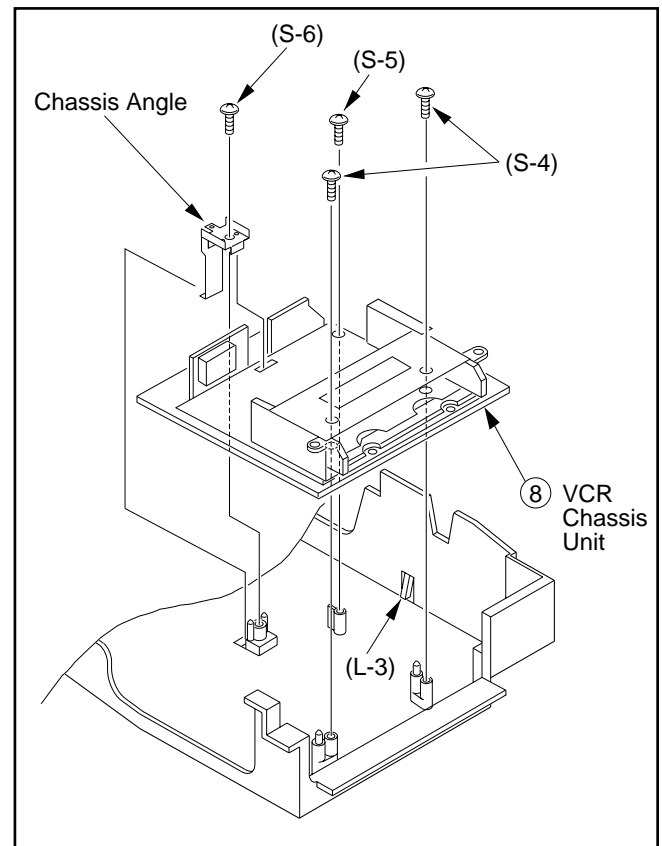


Fig. D8



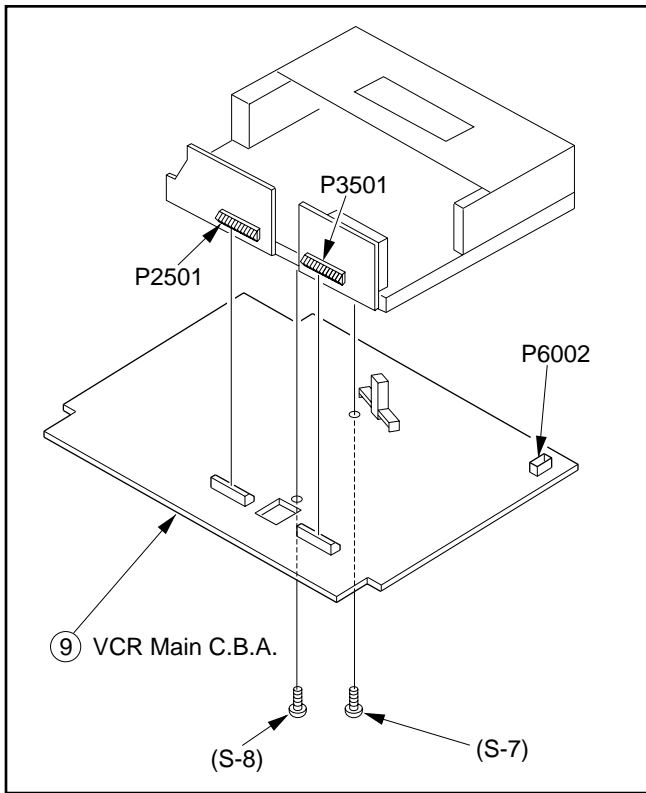


Fig. D9

**Reference <Notes> in Chart, Page 2-1 :**

1. To remove VCR Unit from TV Cavity, proceed with following step,
  - 1) Lift up the rear side of VCR Unit slightly to raise Tabs (B).
  - 2) Slide VCR Unit out as far as you can.
  - 3) Push up front side of VCR Unit from underneath in order to raise 2 Guide Tabs (A) into place.
  - 4) Pull VCR Unit all the way out from TV Cavity.

When reinstalling;  
Ensure that the VCR Unit is mounted all the way to the front.

2. Place unit face down on a soft cloth before removing the CRT Unit.
3. When disconnecting or connecting connectors P201, P202 and P203, work with care not to break them.
4. When removing the VCR Chassis Unit, refer to Note Item 3, Page 1-9.
5. When reinstalling the Cassette Up Ass'y, mechanical adjustment (alignment) should be performed for proper operation. Please refer to "HOW TO INSTALL CASSETTE UP ASS'Y ONTO MECHANISM CHASSIS", Page 2-28.
6. When reinstalling the Mechanism Chassis to the VCR Main C.B.A., refer to "Removal/Installation of Mechanism Chassis to the VCR Main C.B.A.," Page 1-18.

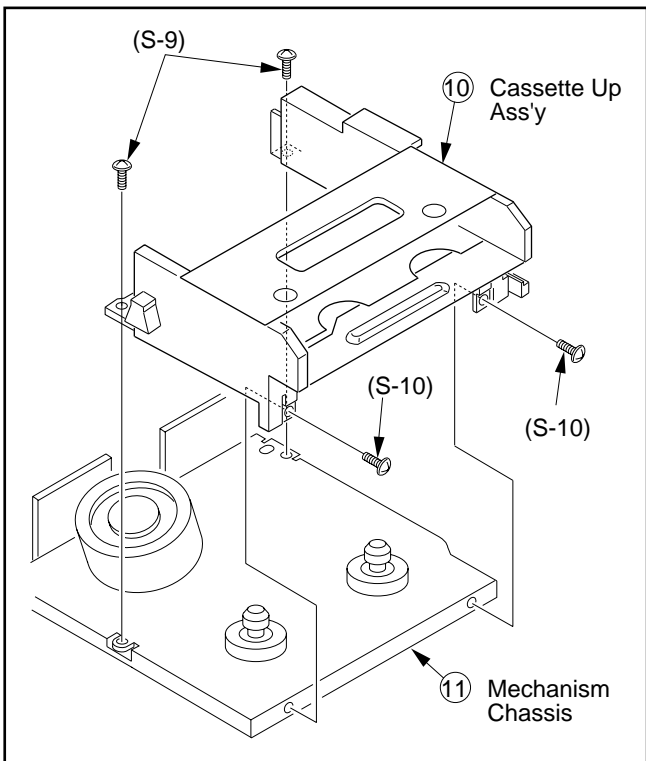


Fig. D10

# 1-2. DISASSEMBLY OF CABINET PARTS

Model : L

## DISASSEMBLY FLOWCHART

This flowchart indicates the disassembly steps of the cabinet parts and the P.C. Boards in order to gain access to the item(s) to be serviced. When reassembling, perform the step(s) in the reverse order.

**Caution : Disconnect AC Plug before disassembly.**

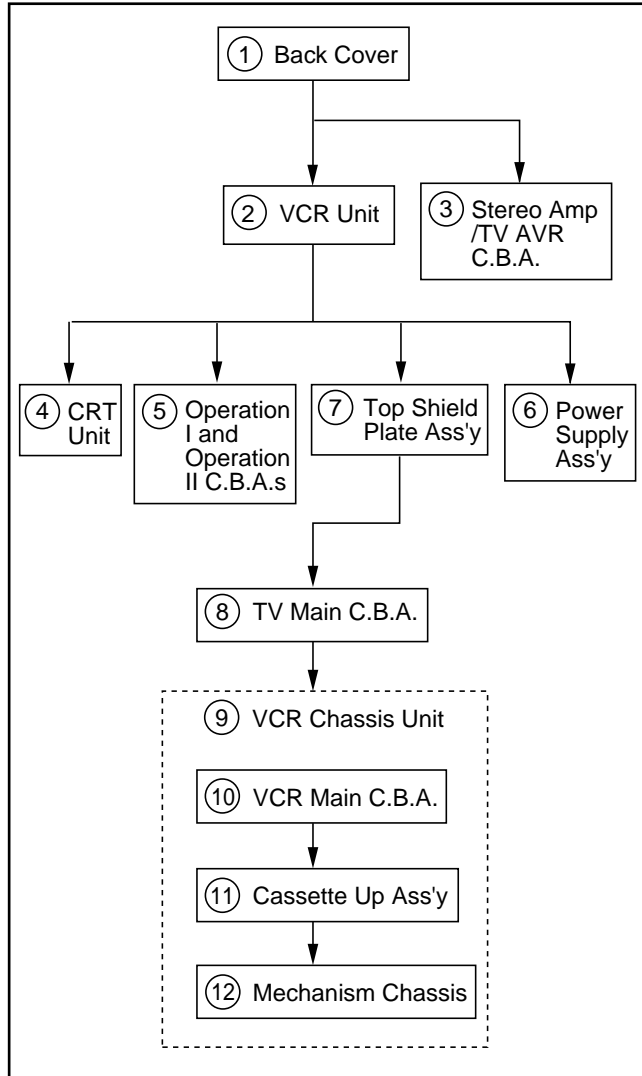


Fig. D1

## DISASSEMBLY METHOD

Step /Loc. No.	Part	Fig. No.	Remove	Note
①	Back Cover	D2	10(S-1)	-
②	VCR Unit	D3-1 D3-2	P354, Anode Cap, P4702, P4703, P802, P803 CRT C.B.A., Deflection Yoke Connector, Degaussing Coil Connector	1
③	Stereo Amp /TV AVR C.B.A.	D4-1 D4-2	4(S-11), (S-12), (L-4), 2(L-5), P4602, P4604, P4605, Heat Sink Support Angle	
④	CRT Unit	D3-1	4(S-2)	2
⑤	Operation I and Operation II C.B.A.s	D5	P6001, 6(L-1)	-
⑥	Power Supply Ass'y	D6	2(S-13), (S-14), P1201, P801 ----- 2(L-6)	- 3
⑦	Top Shield Plate Ass'y	D6	5(S-3)	-
⑧	TV Main C.B.A.	D7	P201, P202, P203, P204, 4(L-2)	4
⑨	VCR Chassis Unit	D8	2(S-4), (S-5), (S-6), (S-15), Chassis Angle, (L-3)	5
⑩	VCR Main C.B.A.	D9	(S-7), (S-8), P6002, P2501, P3501	-
⑪	Cassette Up Ass'y	D10	2(S-9), 2(S-10)	6
⑫	Mechanism Chassis	D10	-----	7

↑ A                      ↑ B                      ↑ C                      ↑ D

### How to read chart shown above :

- Ⓐ : Order of steps in Procedure  
When reassembling, perform the step(s) in the reverse order.  
These numbers are also used as the identification (location) No. of parts in Figures.
- Ⓑ : Part to be removed or installed.
- Ⓒ : Fig. No. showing Procedure or Part Location.
- Ⓓ : Identification of part to be removed, unhooked, unlocked, released, unplugged, unclamped, or unsoldered.  
2(S-1)=2 Screws(S-1);    3(L-1)=3 Locking Tabs(L-1)

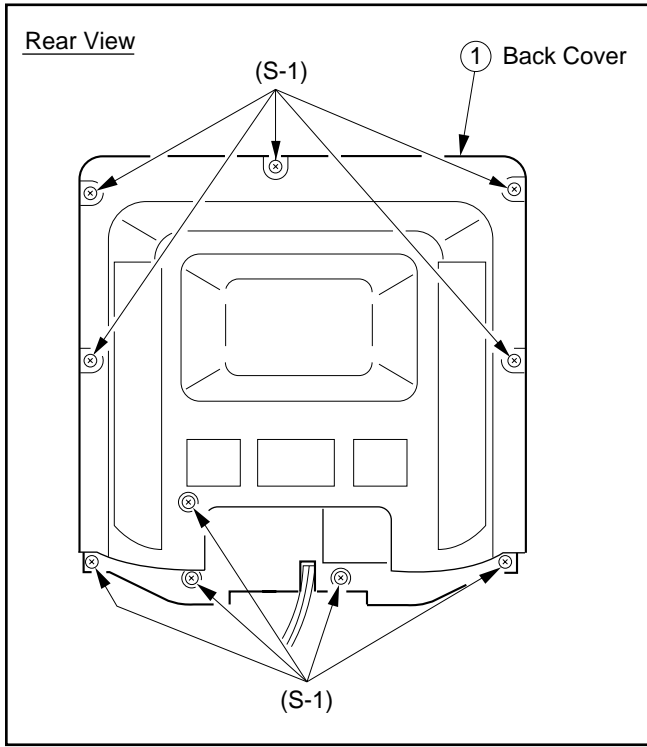


Fig. D2

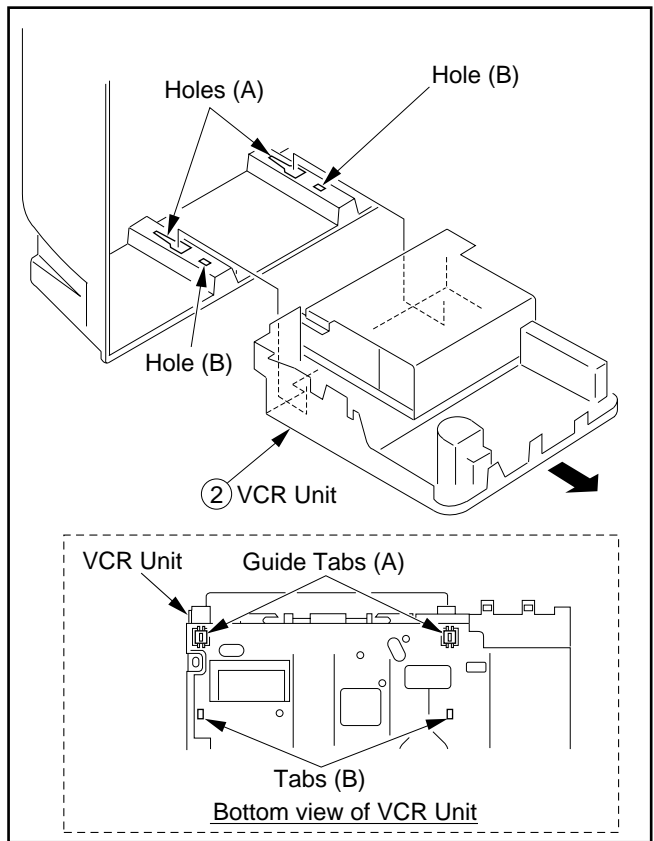


Fig. D3-2

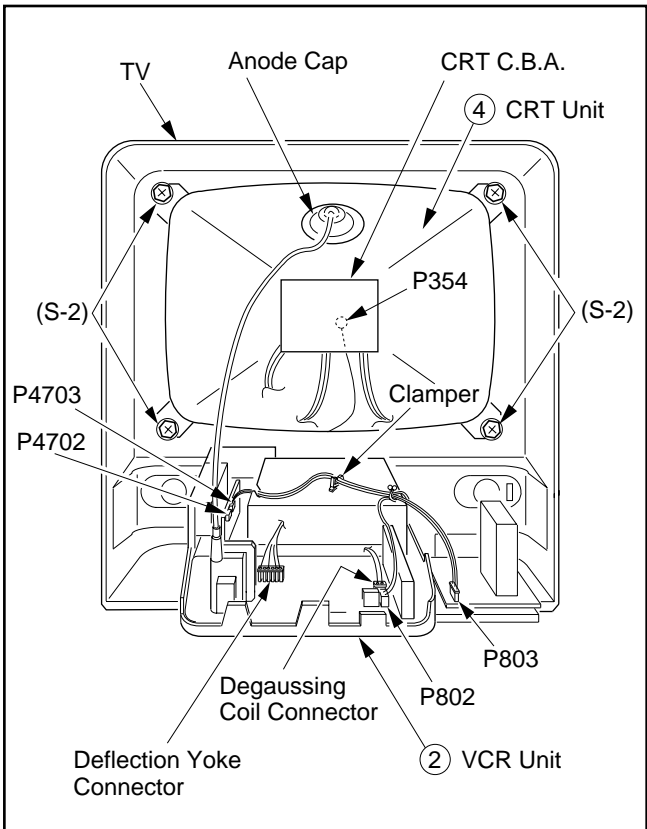


Fig. D3-1

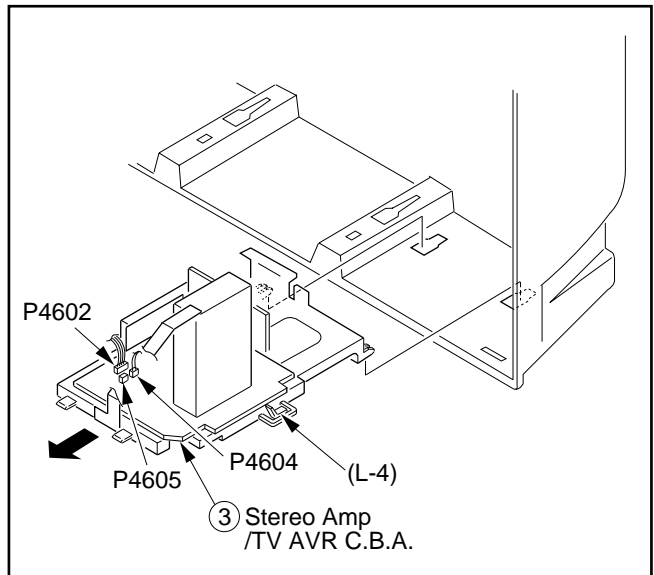


Fig. D4-1

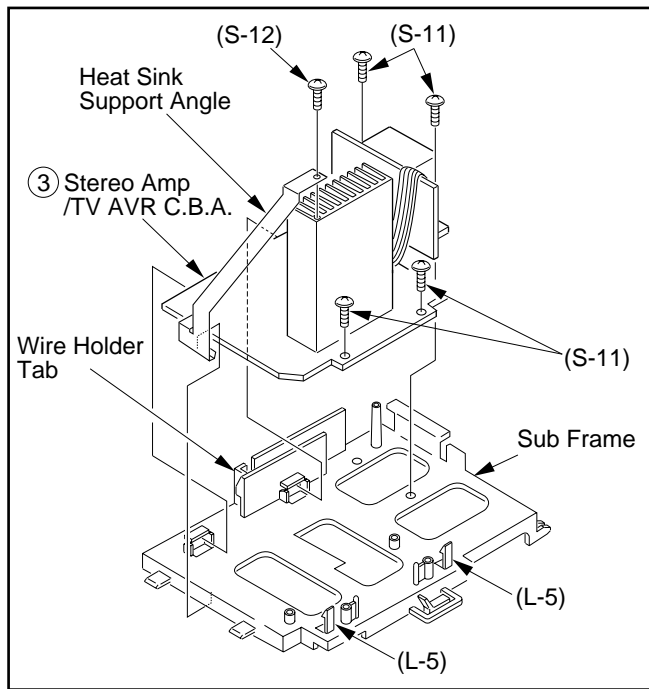


Fig. D4-2

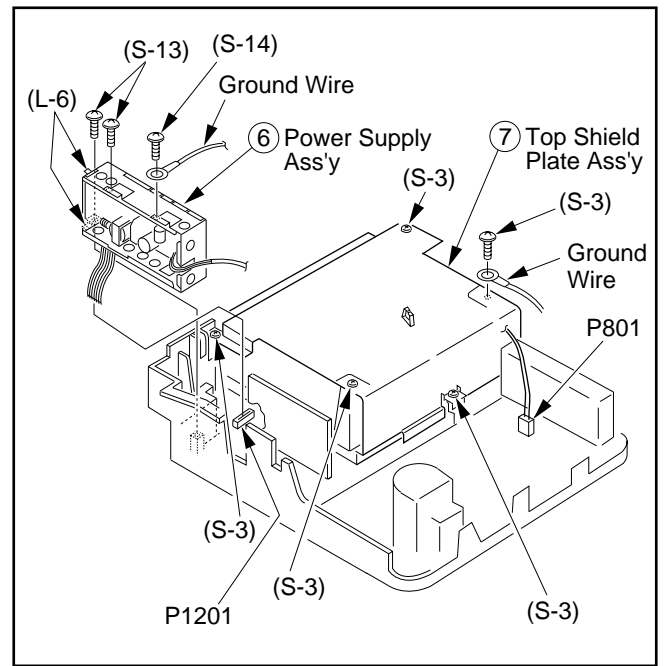


Fig. D6

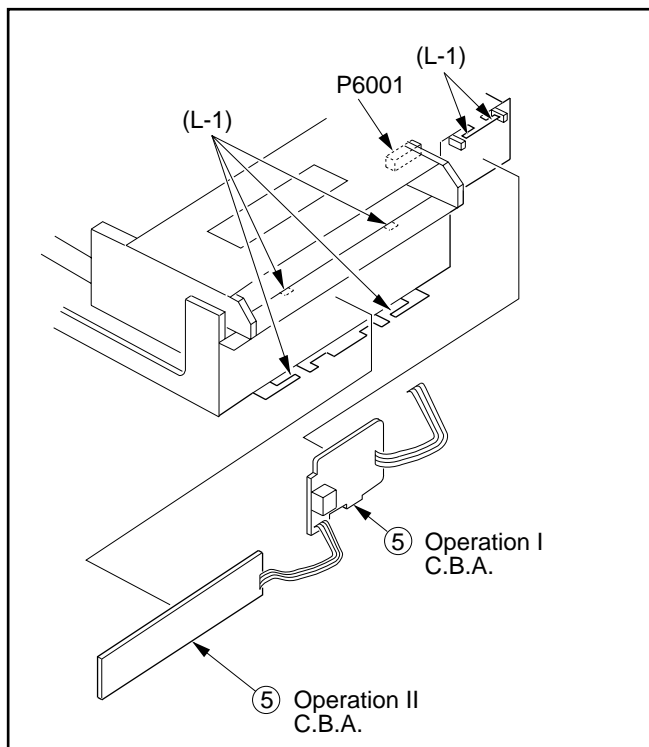


Fig. D5

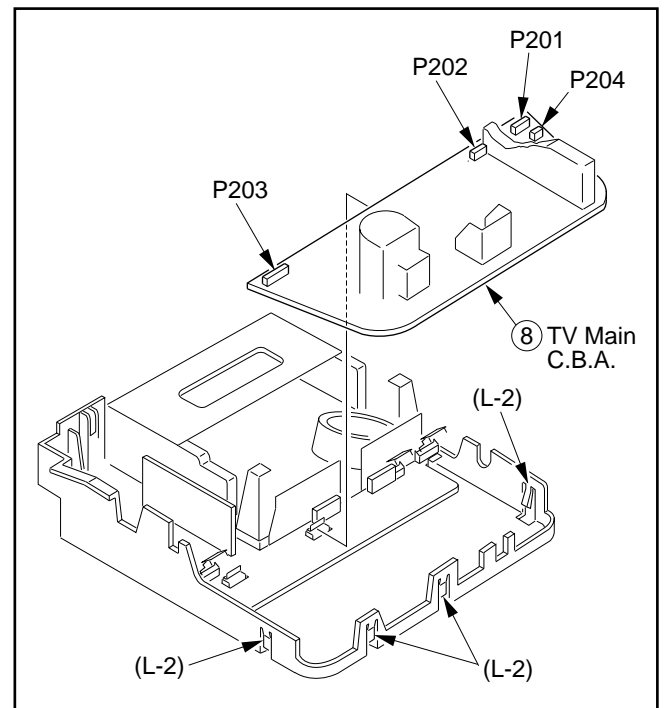


Fig. D7

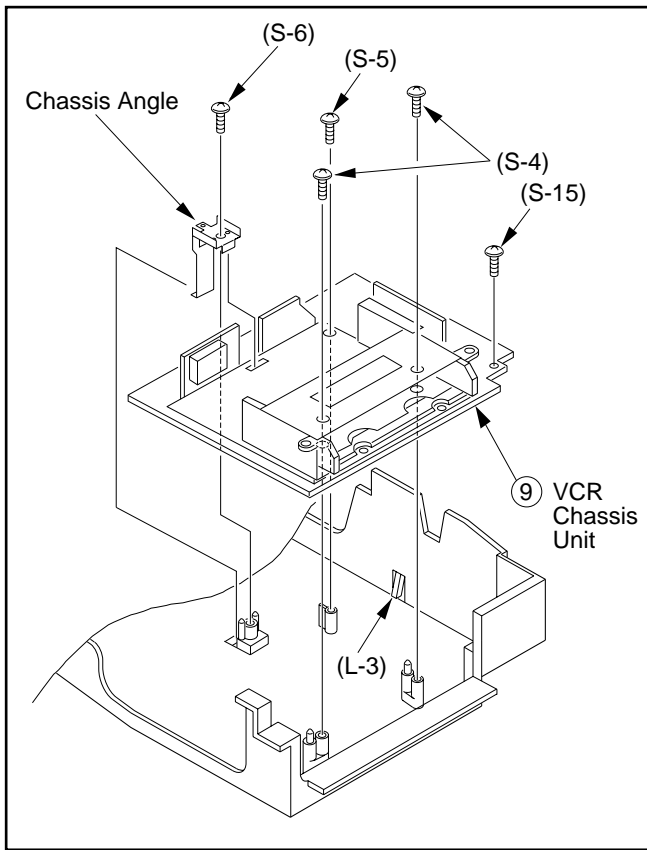


Fig. D8

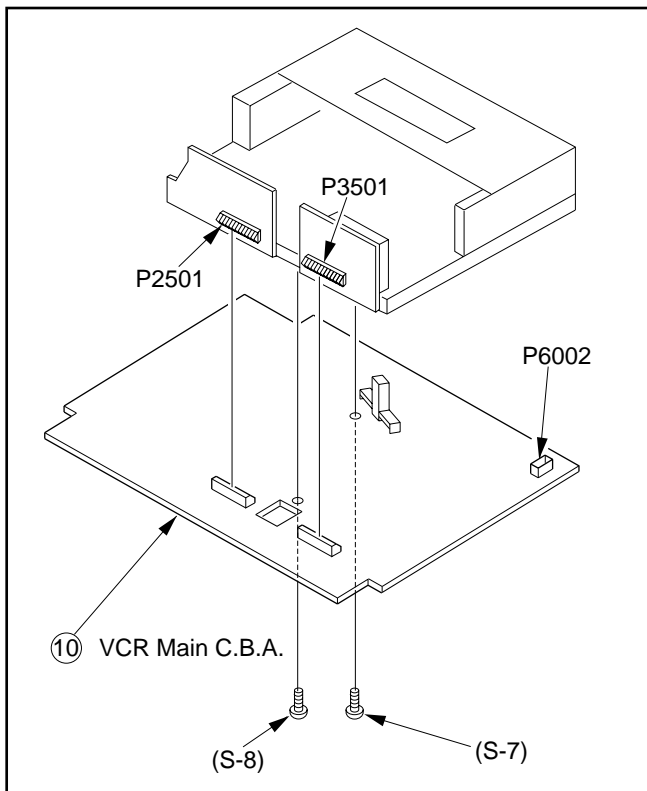


Fig. D9

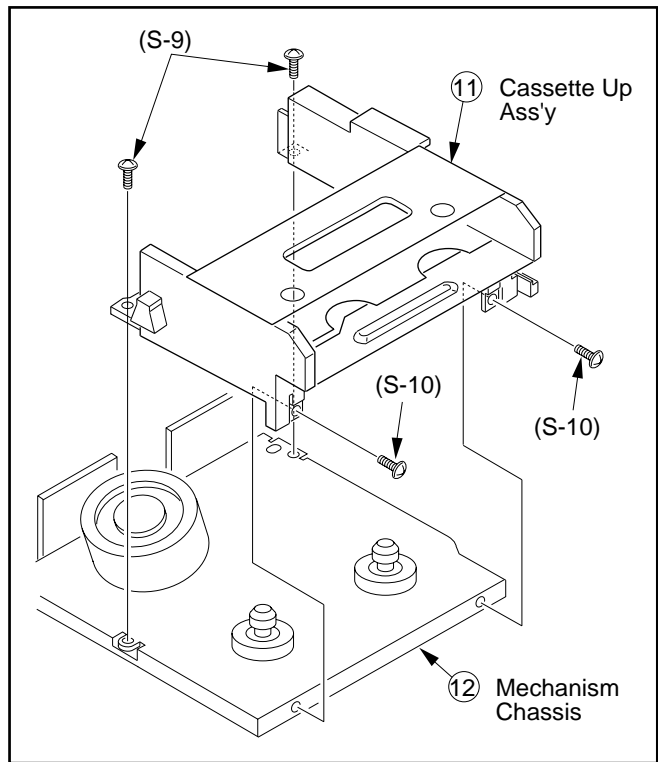


Fig. D10

**Reference <Notes> in Chart, Page 2-5:**

1. To remove VCR Unit from TV Cavity, proceed with following step,
  - 1) Lift up the rear side of VCR Unit slightly to raise Tabs (B).
  - 2) Slide VCR Unit out as far as you can.
  - 3) Push up front side of VCR Unit from underneath in order to raise 2 Guide Tabs (A) into place.
  - 4) Pull VCR Unit all the way out from TV Cavity.

When reinstalling;  
Ensure that the VCR Unit is mounted all the way to the front.

2. Place unit face down on a soft cloth before removing the CRT Unit.
3. When removing the Shield Case of the Power Supply Ass'y, twist and straighten 2 Locking Tabs (L-6) on the Power Supply Ass'y in Fig. D6. Then remove the Shield Case by pulling it away from the Power Supply Ass'y.
4. When disconnecting or connecting connectors P201, P202 and P203, work with care not to break them.
5. When removing the VCR Chassis Unit, refer to Note Item 2, Page 1-10.
6. When reinstalling the Cassette Up Ass'y, mechanical adjustment (alignment) should be performed for proper operation. Please refer to "HOW TO INSTALL CASSETTE UP ASS'Y ONTO MECHANISM CHASSIS", Page 2-28.
7. When reinstalling the Mechanism Chassis to the VCR Main C.B.A., refer to "Removal/Installation of Mechanism Chassis to the VCR Main C.B.A.," Page 1-18.

## 2. PROCEDURE FOR CLEANING UPPER CYLINDER UNIT

1. Position the Video Head to permit access for cleaning. Hold the Upper Cylinder to keep it from turning while cleaning it.
2. Gently rub the Video Heads in the direction of tape travel with a Head Cleaning Stick (VFK27) moistened with Ethanol.
3. Repeat for the other Video Heads.

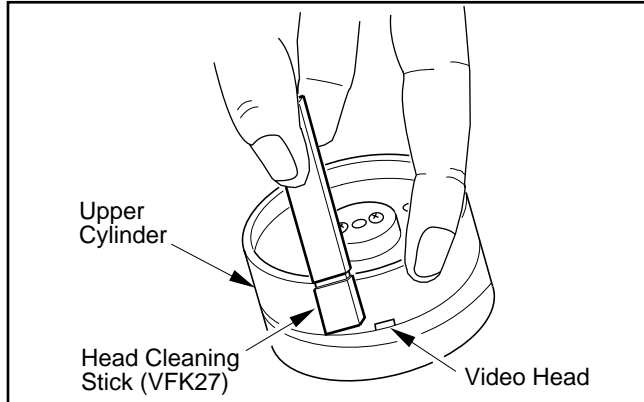


Fig. M1

### Note :

1. Do not rub vertically.
2. Do not apply any pressure to the head. If contaminant is not easily removed, continued gentle wiping will usually remove it.
3. Clean the Cylinder surface with Ethanol if fingerprints are present after cleaning the Video Heads.

## 3. ADJUSTMENT PROCEDURES

### REPLACEMENT OF UPPER CYLINDER UNIT

#### 1. REMOVAL OF UPPER CYLINDER UNIT

Work with extreme care when removing or replacing the Upper Cylinder Unit. Do not touch Video Heads during servicing.

1. Remove 2 Screws with Washers (A) and gently lift the Upper Cylinder Unit from the shaft, refer to Fig. M2.

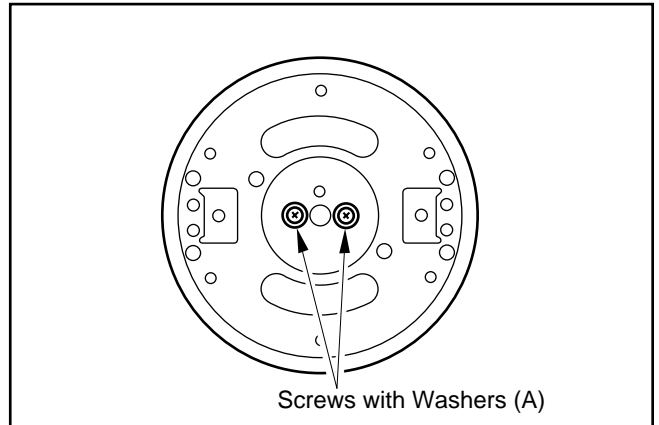


Fig. M2

#### 2. CLEANING OF D.D. CYLINDER SHAFT AND THE SURFACE

1. Before reinstalling a new unit, clean the D.D. Cylinder Shaft and the surface that engages with the Upper Cylinder with a soft cloth dampened with Ethanol in Fig. M3.

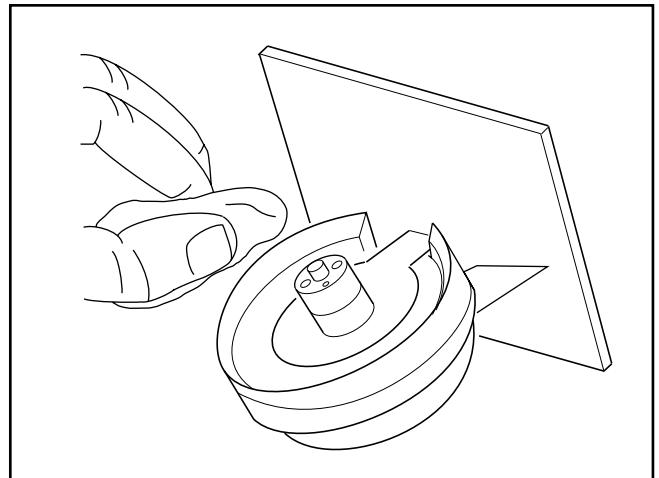


Fig. M3

### 3. REPLACEMENT OF UPPER CYLINDER UNIT

1. Install the Upper Cylinder Unit carefully so that the hole in the Upper Cylinder Unit is properly matched to align the hole on the Upper Cylinder to the center of the indentation on the D.D. Cylinder. For details on the installation position, refer to Fig. M4.

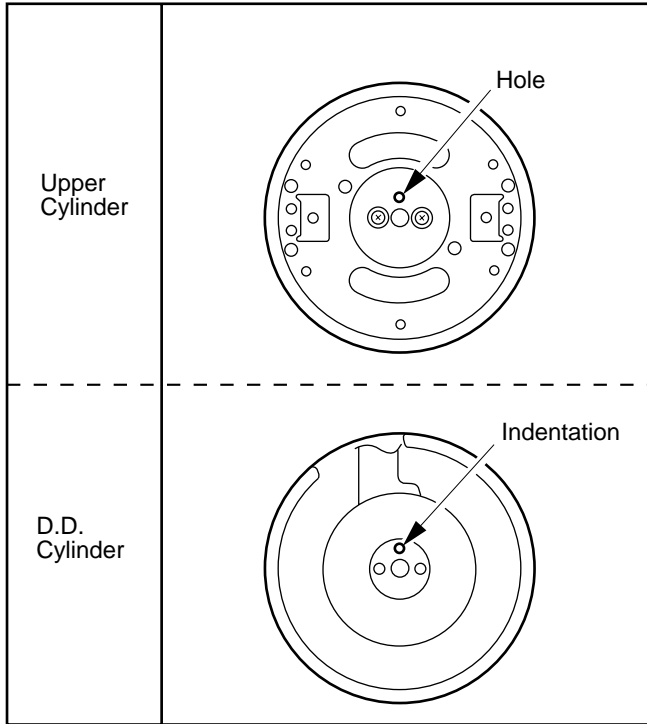


Fig. M4

2. Tighten 2 Screws with Washers (A) shown in Fig. M4.
3. Clean the Upper Cylinder with a deerskin swab (Head Cleaning Stick) saturated with Ethanol.

**Note :**

Upon completion of replacement, perform "TAPE INTERCHANGEABILITY ADJUSTMENT," Page 2-14, especially "HORIZONTAL POSITION ADJUSTMENT OF A/C HEAD," Page 2-16.

### REPLACEMENT OF CYLINDER UNIT

Work with extreme care when removing or replacing the Cylinder Unit. Do not touch Video Heads during servicing.

1. Remove the VCR Chassis Unit.
2. Remove the VCR Main C.B.A.
3. Place the Mechanism Chassis and Cassette Up Ass'y upside down.
4. Remove Black Screw (A) and Earth Plate Unit.
5. Remove 3 Screws (B).
6. Place the Mechanism Chassis and Cassette Up Ass'y in a normal position.
7. Remove 2 Screws (C) and then lift the Cylinder Unit and Head Amp Ass'y slowly from top side.

**Note :**

Since there is very little clearance between the Cylinder Unit and the chassis, remove the Cylinder Unit gently and carefully.

8. Unsolder P3502 and P3503 on the Head Amp Ass'y and then remove the Head Amp Ass'y from the Cylinder Unit.
9. Place the Mechanism Chassis and the Cassette Up Ass'y upside down.

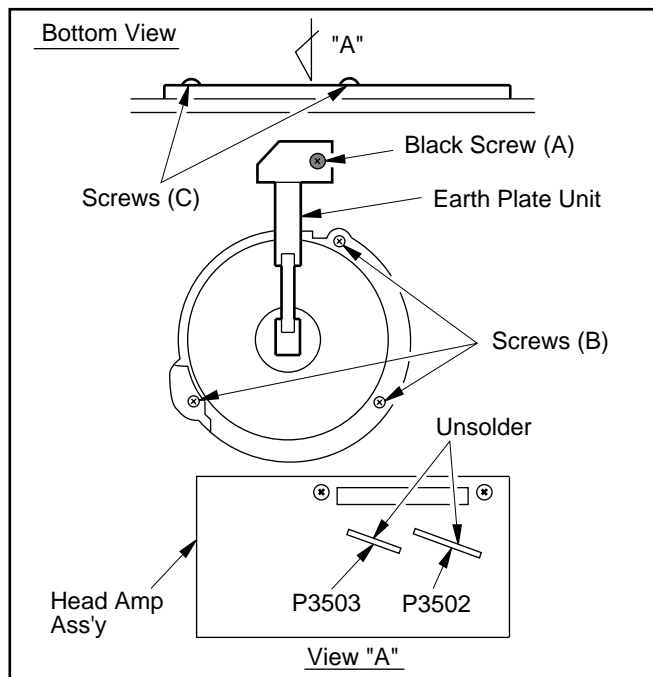


Fig. M5-1

10. Reinstall the Cylinder Unit on to the chassis by reversing the procedure previously described.

Note :

1. Reinstall the Cylinder Unit so that the 2 projections on the Cylinder Base of chassis meet the 2 holes on the lower surface of the Cylinder. Then while twisting the D.D. Cylinder as shown in Fig. M5-2, fix it with 3 screws. Correct Cylinder position is necessary for tape transportation alignment.

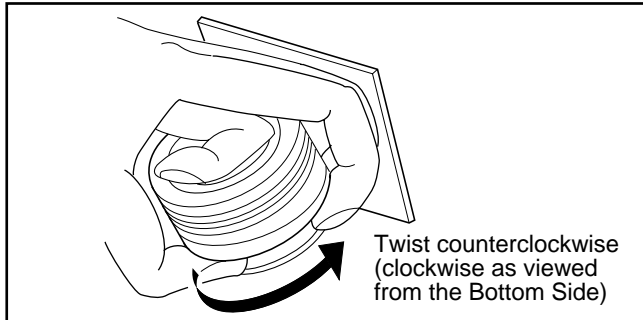


Fig. M5-2

2. Hold the Cylinder with extreme care so as not to touch the Heads or the tape path on the Cylinder. If any of these parts are touched, clean them with a deerskin swab (Head Cleaning Stick) saturated with Ethanol.
3. Upon completion of the replacement procedure, be sure that the Cylinder Unit works. If any further maintenance is required, perform "TAPE INTERCHANGEABILITY" with the alignment tape (VFMS0001H6).
4. Adjustment of the Earth Plate Unit is required after installation. Refer to "CONFIRMATION OF EARTH PLATE UNIT INSTALLATION POSITION".

### CONFIRMATION OF EARTH PLATE UNIT INSTALLATION POSITION

Purpose :

To optimize the position of the Earth Plate Unit.

Symptom of Misadjustment :

May cause Cylinder rotating buzz.

Remove the Mechanism Unit. Place it upside down. Check to see if the Earth Plate Unit is properly set in a position just less than 1mm (but not more than 1mm), as measured from the center of the plate to the center of the Cylinder Shaft as shown in Fig. M6. If required, adjust the Earth Plate Unit position by loosening Black Screw (A).

Note :

Never install the Earth Plate Unit in the opposite position (on the left side of the center of the Cylinder Shaft), but always within a maximum of 1mm to the right side of the center of this shaft.

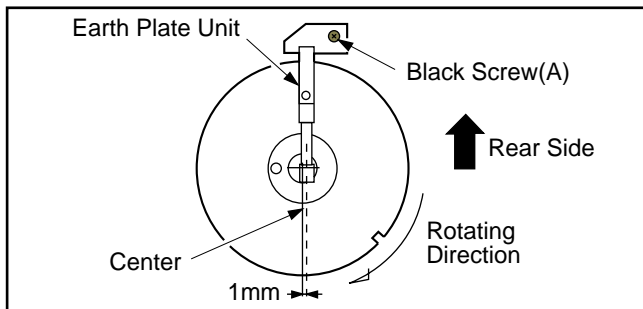


Fig. M6

### POSITION ADJUSTMENT OF TENSION POST (PRELIMINARY)

Purpose :

To feed a constant tension to the tape so that the tape runs with stability, by performing a preliminary adjustment.

Symptom of Misadjustment :

- 1) If the adjusted value is below the specification, the tape tension is not sufficient, thus causing a tape slack to occur.
- 2) If the adjusted value is above the specification, the tape tension is too high, thus causing tape damage to occur.

\*Equipment Required :

2mm Hex. Wrench ..... (Purchase Locally)

1. Remove the Cassette Up Ass'y.
2. Place a jumper between TP6001 and GND.
3. Turn ON the Power Switch and press the Play Button to complete the loading operation sequence.
4. As soon as loading is completed, insert the Hex. Wrench(2mm) into the Tension Band Fastener and adjust it (only counterclockwise) as indicated by the arrow so that the outside edge of the Tension Post lines up with the outside edge of Cut Washer on the P1 post. (See Fig. M7)
5. Remove the Hex. Wrench (2mm).
6. Press the Stop/Eject Button to complete the unloading operation Sequence.
7. Remove the jumper between TP6001 and GND.
8. Reinstall the Cassette Up Ass'y and cabinet parts.

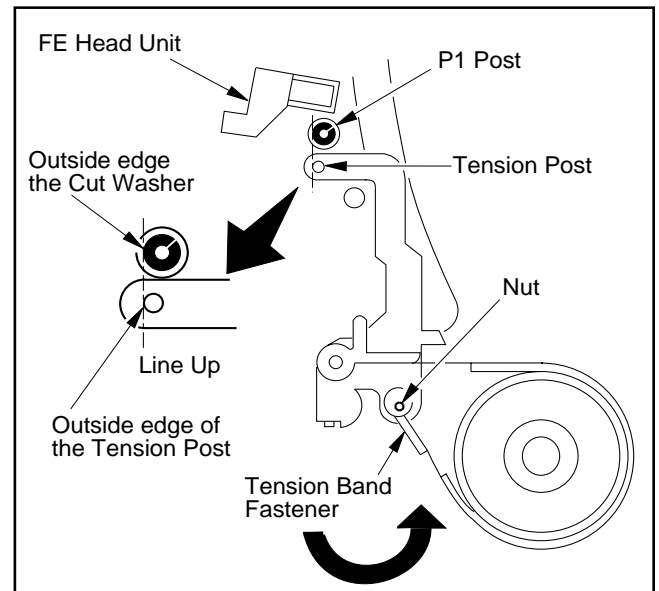


Fig. M7



## MEASUREMENT AND ADJUSTMENT OF BACK TENSION

### Purpose :

To fine adjust the Back Tension so that the tape runs smoothly with a constant tension.

### Symptom of Misadjustment :

- 1) If the tape tension is less than the specified value, the tape cannot come into proper contact with the Video Heads, resulting in poor picture playback.
- 2) If the tape tension is too high, the tape will soon be damaged.

### A : Measurement Procedure

#### \*Equipment Required :

Back Tension Meter (Made in U.S.A., Purchase Locally)  
VHS Cassette Tape (120-Minute Tape)

\*Specification ..... 20 ~ 25g

1. Play back a T120 cassette tape from its beginning for approx. 10 to 20 seconds, until the tape's movement has stabilized.
2. Insert a Tension Meter into tape path and confirm the reading.
3. If the reading is out of specification, do the adjustment procedure.

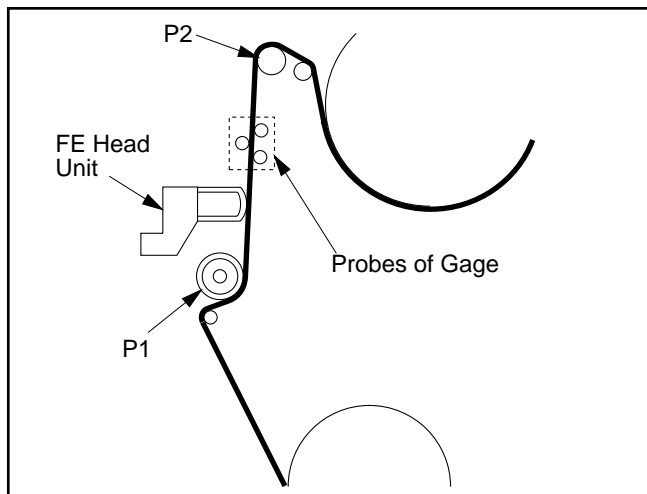


Fig. M8

#### Note :

1. Be sure that the three probes of the meter are all in solid contact with the tape, but out of contact with any other parts while measuring.
2. It is recommended that measurements be taken three times because the tension meter is very sensitive to external vibrations.

### B : Adjustment Procedure

1. Remove the Cassette Up Ass'y. Then re-position the Tension Spring on the Tension Arm Base Teeth in either direction as indicated by the arrow to obtain the specified tension. (See Fig. M9).
2. Re-position the Tension Spring toward the front to increase tension, or toward the rear to decrease tension.
3. Reinstall the Cassette Up Ass'y and verify tension with the meter once again.

#### Note :

If the specified tension is not obtained even if the Tension Spring is re-positioned, replace the Tension Spring, and the Tension Band, clean the Reel Table, or make sure there is no dust between the Tension Band and the Reel Table.

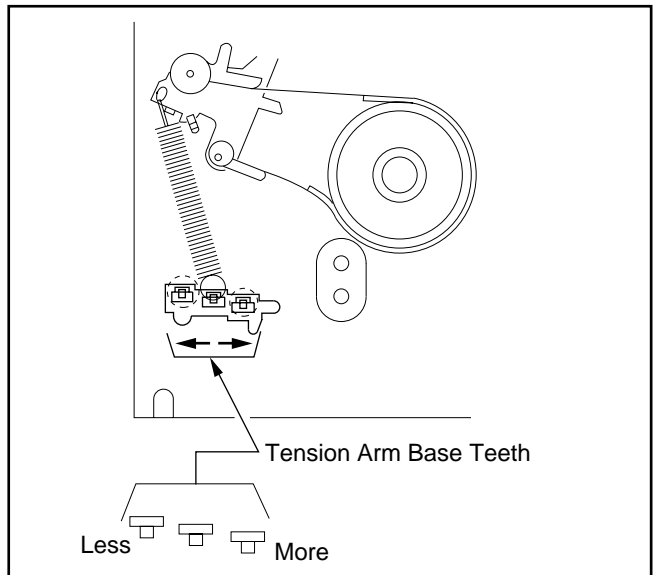


Fig. M9

## HEIGHT ADJUSTMENT OF REEL TABLES

### Purpose :

To properly align the height of the tape wound on the Supply and Take-Up Reels.

### Symptom of Misadjustment :

If the height of the tape is not properly aligned, the tape will eventually be damaged.

#### \* Equipment Required :

Post Adjustment Plate ..... (VFKS0010)  
Reel Table Height Fixture ..... (VFKS0009)

\* Specification .....  $0 \pm 0.1\text{mm}$

1. Remove the Cassette Up Ass'y.
2. Place the Post Adjustment Plate over the reels, and put the fixture on it. Set the fixture to zero ("0") and ensure that the foot of the fixture touches the cut-out portion of the plate.

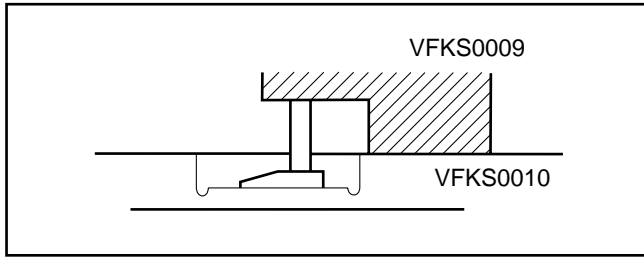


Fig. M10-1

3. Then measure the top portion of the Reel Table and compare the difference against the result of the measurement taken in the above step. Do the same for the other reel table.

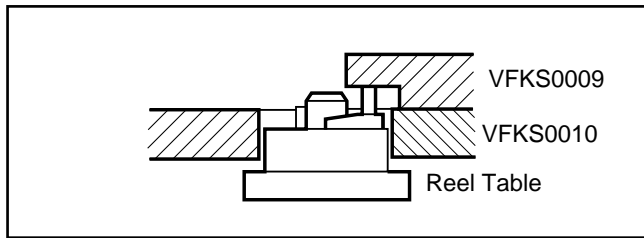


Fig. M10-2

4. If the difference is more than 0.1mm (higher or lower), adjust the height of the reel table to obtain the specified height.
5. For adjustment, change the poly washer located under the reel table. (The washer is available in only one size of 0.13mm thick.) Move the locking tab to remove the reel table.
6. Reinstall the Cassette Up Ass'y and the cabinet parts.

**HEIGHT ADJUSTMENT OF TAPE GUIDE POSTS (PRELIMINARY ADJUSTMENT)**

\*Equipment Required :

- Lock Screw Wrench ..... (VFKS0032)
- Post Adjustment Plate ..... (VFKS0010)
- Reel Table Height Fixture ..... (VFKS0009)
- Post Adjustment Screwdriver ..... (VFK0329)

**1. HEIGHT ADJUSTMENT OF P2 AND P3**

Purpose :

To properly align the position of the tape with the Cylinder Lead so that the tape runs with stability.

Symptom of Misadjustment :

- 1) Since the Envelope Waveform Signal cannot be tracked properly, the Playback picture will be poor.
- 2) Since the tape does not run smoothly, the tape will eventually be damaged.
- 3) Tape interchangeability is poor.

1. Remove the Cassette Up Ass'y. Then install the Post Adjustment Plate.

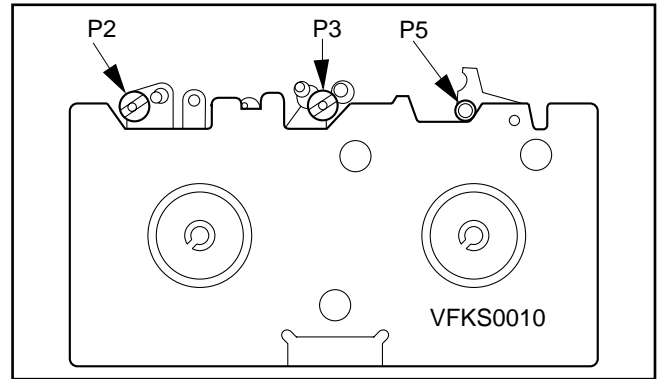


Fig. M11-1

2. First, lower all posts to match the height condition as shown in Fig. M11-2.

The upper edge of the lower tape guide on each post should be below the bottom of the foot.

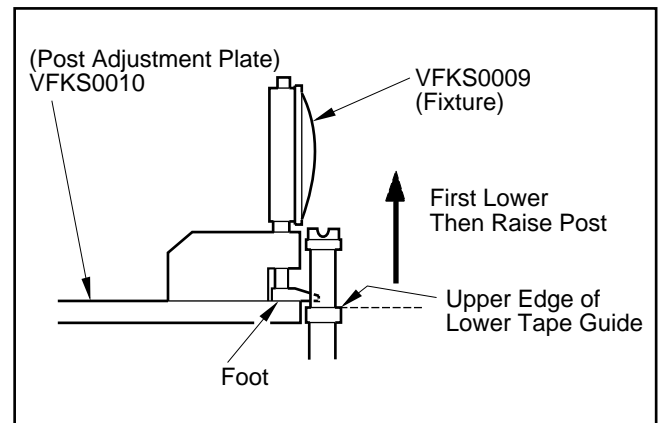


Fig. M11-2

3. Place the fixture on the Post Adjustment Plate and fit the foot to the Adjustment Plate as shown in Fig. M11-2. (The foot of the fixture should be fully lowered until it touches the plate.)
4. Set the fixture to zero ("0") and slowly raise the post until it just touches the foot. When the foot touches the post, it should fit as shown in Fig. M11-3 (b).

For adjustment of P2 and P3, use a Post Adjustment Screwdriver.

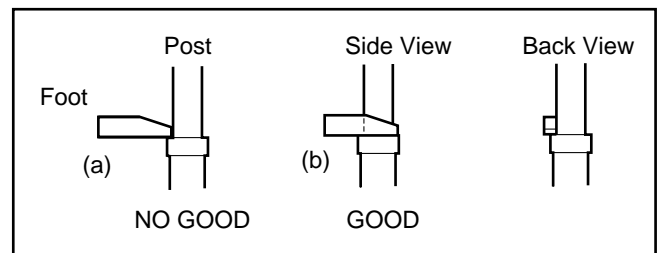


Fig. M11-3

## 2. HEIGHT ADJUSTMENT OF P5 ARM UNIT

**Purpose :**

To properly align the Phase and Speed Controls during the CUE/REVIEW Modes and perform the CUE/REVIEW operations without any small additional noise in the picture.

**Symptom of Misadjustment :**

- 1) Noticeable noise appears in the picture.
- 2) The tape will eventually be damaged.

**\*Equipment Required :**

Post Adjustment Plate ..... (VFKS0010)  
 Reel Table Height Fixture ..... (VFKS0009)  
 Nut Driver (5.5mm) ..... Purchase Locally

**\*Specification** ..... 0 (+0, -0.06) mm

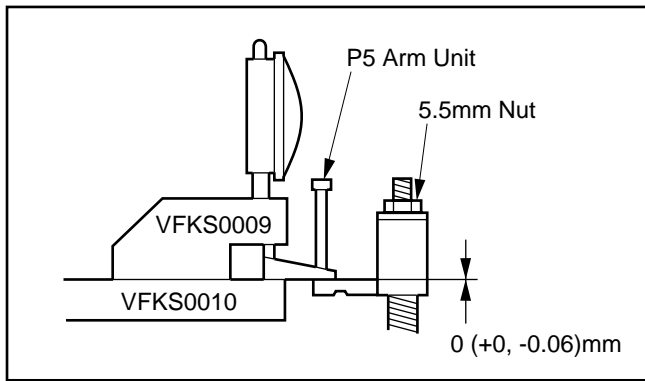


Fig. M11-4

1. Place the Post Adjustment Plate over the Reels, and put the Fixture on it. Set the Fixture to zero ("0") when the foot just touches the Post Adjustment Plate.
2. Slightly raise the P5 post above the plate by turning the 5.5mm Nut counterclockwise. Place the foot on the post as shown in Fig. M11-4.
3. Then slowly turn the 5.5mm Nut clockwise until the fixture reads the specified height.
4. Remove the Post Adjustment Plate. Reinstall the Cassette Up Ass'y and the cabinet parts.

**Note:**

Upon completion of the above procedure, play back the tape and confirm that the tape runs properly without curling between the lower and upper limits of the P5 Post. Also confirm that the tape is running smoothly. If adjustment is required, slightly turn the 5.5mm Nut until the curling smooths out.

## TAPE INTERCHANGEABILITY ADJUSTMENT (FINAL ADJUSTMENT)

**Note :**

To perform these adjustment/confirmation procedures, set Tracking to the Neutral position.

**\*Equipment Required :**

Dual Trace Oscilloscope  
 VHS Alignment Tape ..... (VFMS0001H6)  
 Post Adjustment Screwdriver ..... (VFK0329)  
 H-Position Adjustment Screwdriver ..... (VFKS0082)

### 1. CONFIRMATION OF TAPE TRAVEL

**Purpose :**

To be sure that the tape runs smoothly.

**Symptom of Misadjustment :**

If the tape travels with instability, the tape will be damaged.

1. Play back a T120 cassette tape and confirm that the tape travels without curling at the upper and lower guides on posts P2 and P3.

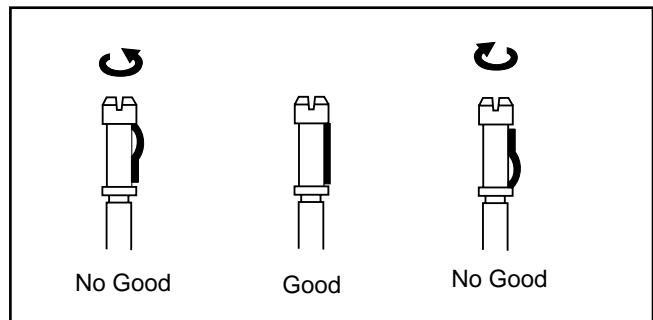


Fig. M12

2. If curling is apparent, adjust the height of the posts by turning the top of the post with the Post Adjustment Screwdriver (for P2 & P3).

## 2. CONFIRMATION OF A/C HEAD HEIGHT

The height of the A/C Head replacement part assembly has already been adjusted at the factory.

Purpose :

To be sure the tape runs properly along the Control Head.

Symptom of Misadjustment :

If the control signal is not properly picked up, Servo Operation cannot be achieved. A Blue screen will be seen in Playback.

This confirmation is required when the A/C Head is replaced and for a preliminary height adjustment. For final adjustments, perform "CONFIRMATION OF TILT OF A/C HEAD and AZIMUTH ADJUSTMENT OF A/C HEAD".

1. Looking at the lower edge of the Control Head with the T120 tape in motion, ensure that the lower edge of the tape runs 0.25mm above the lower edge of the control head. If it doesn't, turn Black Screws (A), (B), and (C) slightly in either direction as necessary to correct it. Turn clockwise to lower the head and counterclockwise to raise it. When turning Screws (A), (B), and (C), they must each be turned the same amount.

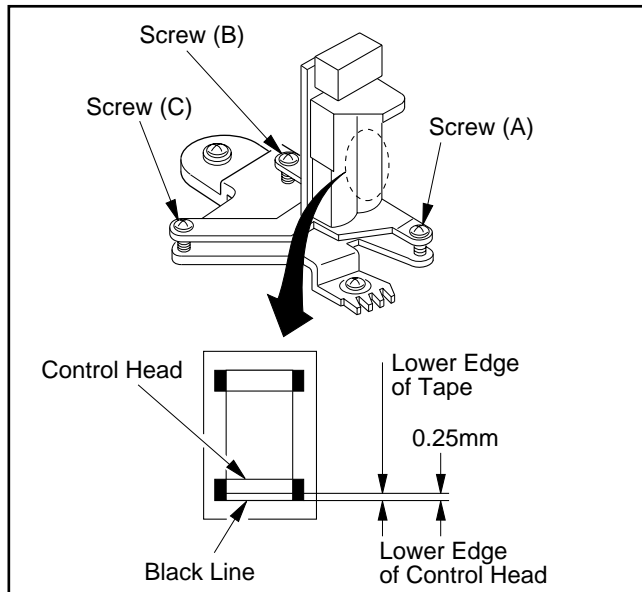


Fig. M13

## 3. CONFIRMATION OF TILT OF A/C HEAD

Purpose :

To confirm that the tape runs smoothly. In particular, confirm that the tape properly picks up the Audio Signal at the upper part of the head and the Control Signal at the lower part of the head.

Symptom of Misadjustment :

If the tilt of the A/C Head is poorly adjusted, the tape will eventually be damaged. An intermittent Blue screen may be seen in Playback.

1. Play back a T120 Cassette tape and confirm that the tape runs properly between the lower and upper limits of the P4 post. Also confirm that the tape runs smoothly.
2. If adjustment is required, turn Black Screw (B), shown in Fig. M13, clockwise until curling is apparent at the lower edge of P4. Then turn Black Screw (B) counterclockwise until the curling smooths out.

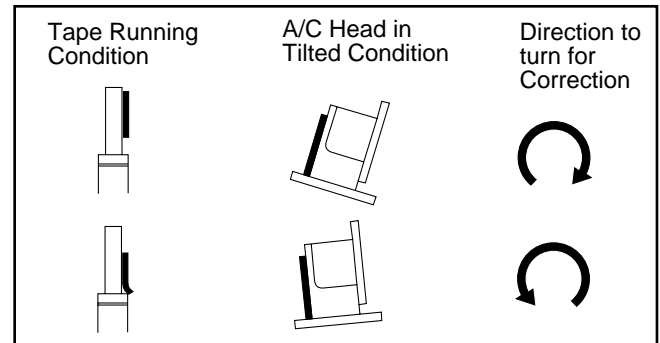


Fig. M14

## 4. AZIMUTH ADJUSTMENT OF A/C HEAD

Purpose :

To adjust the position and height of the A/C Head so that it meets the tape tracks properly.

Symptom of Misadjustment :

If the position of the A/C Head is not properly adjusted, the Audio S/N Ratio is poor.

1. Connect the oscilloscope to the audio output jack on the rear side of the deck.
2. Play back the monoscope portion (6KHz, Mono) of the alignment tape (VFMS0001H6).
3. Adjust Black Screw (C) on the head base, shown in Fig. M13, so that the output level is at maximum.

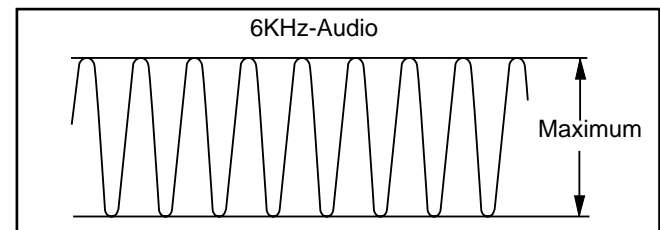


Fig. M15

4. Readjust Black Screw (A), shown in Fig. M13, for maximum output.
5. Disconnect the oscilloscope.

## 5. HORIZONTAL POSITION ADJUSTMENT OF A/C HEAD

Purpose :

To adjust the Horizontal Position of the A/C Head.

Symptom of Misadjustment :

If the Horizontal Position of the A/C Head is not properly adjusted, a maximum envelope cannot be obtained at the Neutral Position of the Tracking Control Circuit.

Place a jumper between TP6003 and +5V(TP6020) on the System Control Section of the VCR Main C.B.A. to defeat Auto Tracking.

1. Eject the tape and insert it again, to access the Neutral Tracking position. Connect the oscilloscope to TP3002 on the Video Signal Process Section of the VCR Main C.B.A. Use TP6205 as a trigger.
2. Play back the monoscope portion of the alignment tape (VFMS0001H6) and confirm that the RF envelope appears, as in Fig. M17-1.
3. If adjustment is required, loosen the Black Screw with 2 Washers (D) and tighten the Screw lightly. Set the H-Position ADJ. Screwdriver into the Hole (E) shown in Fig. M16. Then slowly turn the fixture either clockwise or counterclockwise so that the envelope is at maximum.

Model : A,B,C,D,E,H,I,J,L

4. Tighten the Black Screw with 2 Washers (D).
5. Remove the Jumper between TP6003 and +5V(TP6020).

Model : F,G,K

4. Before finding the center of the maximum period of the envelope, rotate the fixture back and forth slightly to confirm the limits on either side of the maximum period.
5. Push the Tracking Control Up Button (on the Remote Control) several times (count the number of times pushed) until the maximum envelope is reduced to 1/2.
6. Reset the tracking to the neutral position by ejecting the tape and reinserting it. Push the Tracking control DOWN Button (on the Remote Control) several times (count the number of times pushed) until the maximum envelope is reduced to 1/2.
7. If the number of pushes is not the same, then loosen the Black Screw with 2 Washers (D) and set the H-Position ADJ. Screwdriver into the Hole (E) shown in Fig. M16. Then find the center point. Then repeat the above procedure to determine the center point.
8. Tighten the Black Screw with 2 Washers (D).
9. Remove the Jumper between TP6003 and +5V(TP6020).

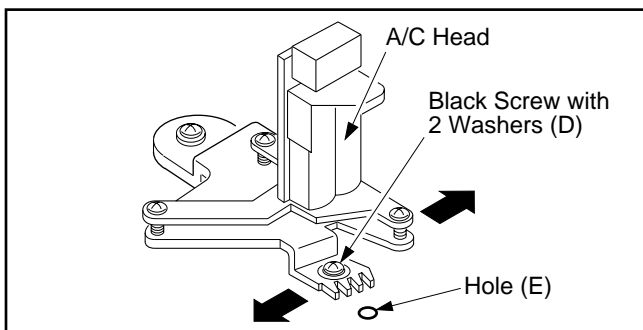


Fig. M16

## 6. CONFIRMATION/ADJUSTMENT OF ENVELOPE OUTPUT

Purpose :

To achieve a satisfactory picture and secure precise tracking.

Symptom of Misadjustment :

If the envelope is output poorly, much noise will appear in the picture. Then the tracking will lose precision and the playback picture will be distorted by any slight variation of the tracking control circuit.

Place a jumper between TP6003 and +5V(TP6020) on the System Control Section of the VCR Main C.B.A. to defeat Auto Tracking.

1. Eject the tape and insert it again, to access the Neutral Tracking position. Connect the oscilloscope to TP3002 on the Video Signal Process Section of the VCR Main C.B.A. Use TP6205 as a trigger.
2. Play back the monoscope portion of the alignment tape (VFMS0001H6). Adjust the height of posts P2 and P3 while watching the scope display so you can make the envelope as flat as possible. ( $V1/V\text{-max} \geq 0.7$ ,  $V2/V\text{-max} \geq 0.8$ )

If adjustment is required, turn the top of the post with a Post Adjustment Screwdriver. For adjustment of P2 and P3, refer to "CONFIRMATION OF TAPE TRAVEL," Page 2-14.

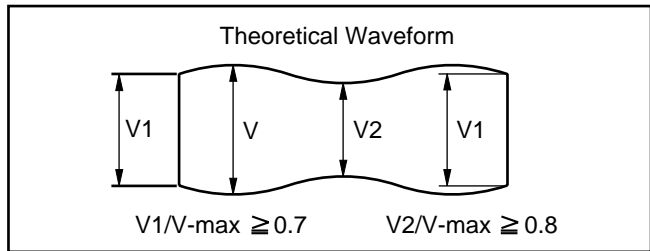


Fig. M17-1

3. When the scope display is as shown in Fig. M17-2, adjust the height of P2 so that the waveform looks like the one shown in Fig. M17-4.

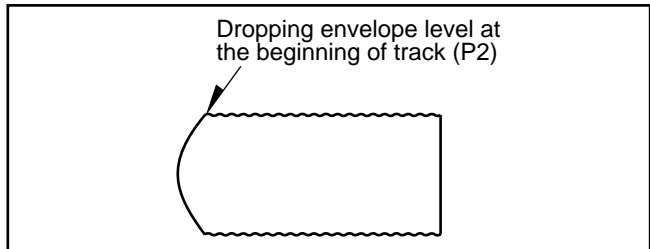


Fig. M17-2

4. When the scope display is as shown in Fig. M17-3, adjust the height of P3 so that the waveform looks like the one shown in Fig. M17-4.

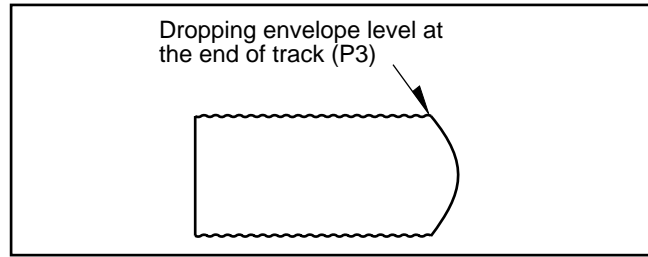


Fig. M17-3

5. When P2 and P3 are adjusted properly, there is no Envelope Drop at the beginning or end of the track as shown in Fig. M17-4.

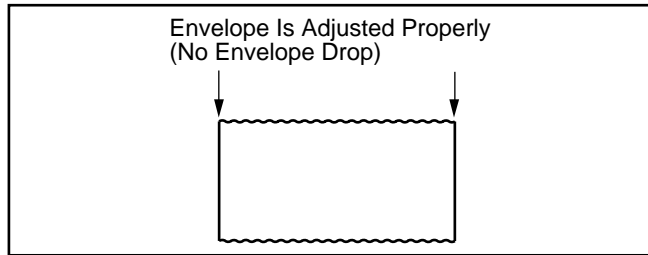


Fig. M17-4

6. Remove a jumper between TP6003 and +5V(TP6020).

**Note:**

Upon completion of the adjustment of P2 and P3, confirm the Horizontal Position of the A/C Head by pushing the Tracking Control Up or Down Buttons alternately, using the Infrared Remote Control Unit, to check the symmetry of the envelope. If required, perform "HORIZONTAL POSITION ADJUSTMENT OF A/C HEAD," Page 2-16.

**ADJUSTMENT OF FG HEAD GAP**

**Purpose :**  
To properly pick up the FG Signal.

**Symptom of Misadjustment :**  
If the FG Signal is not properly picked up, Servo Operation cannot be achieved.

**\* Equipment Required :**  
Oscilloscope

**\* Specification :** .....  $0.13 \pm 0.02\text{mm}$

1. Remove the VCR Chassis Unit and then place it upside down.
2. Remove the VCR Main C.B.A..
3. Slightly loosen Black Screw (A) and Screw (B). Then set the Screwdriver (#1 or #2 Phillips Driver) into the Hole (C) shown in Fig. M18. Turn the screwdriver counterclockwise until the FG Head touches the rotor. Then turn it slightly clockwise to the clearance as specified.
4. Tighten Black Screw (A) and Screw (B) shown in Fig. M18.
5. Reinstall the VCR Main C.B.A.Fig. M18

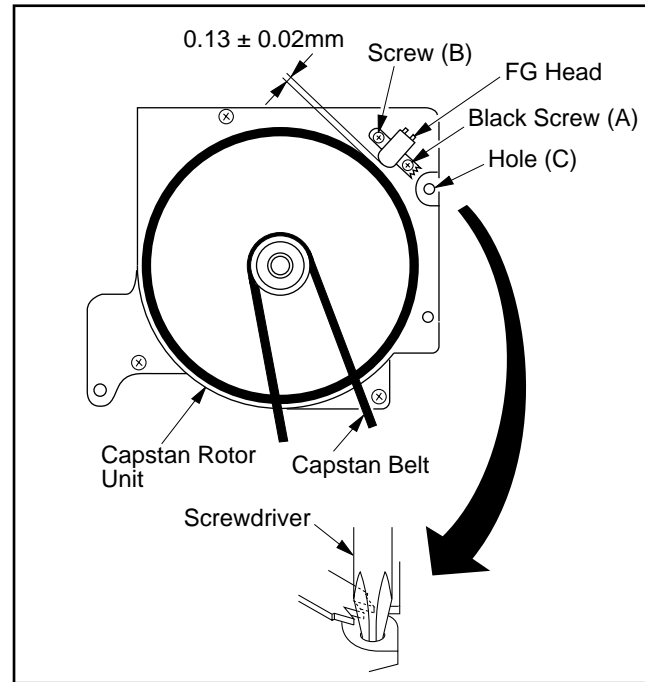


Fig. M18

**Note :**  
Do not touch the outside circumference of the rotor surface with any tool and keep magnetic material away from the rotor magnet (especially metal particles).

**(Confirmation)**

- 1) Supply a Video Signal to the Video Input Jack on the rear side of the deck.
- 2) Insert a cassette tape and place the unit in SLP recording mode.
- 3) Connect the oscilloscope to Pin 15 of P2502 on the Capstan Motor Drive C.B.A.. Confirm that the signal level is greater than 10mVp-p.

**REPLACEMENT OF CAPSTAN ROTOR OR STATOR UNIT**

1. Remove the Capstan Belt (Fig. M18).
2. In the order described in the Disassembly and Assembly Procedures of Mechanism section, remove the Motor Block Ass'y.
3. Carefully pull out the Capstan Rotor Unit. Be careful not to lose the 2 Oil Seals shown in Fig. M19.

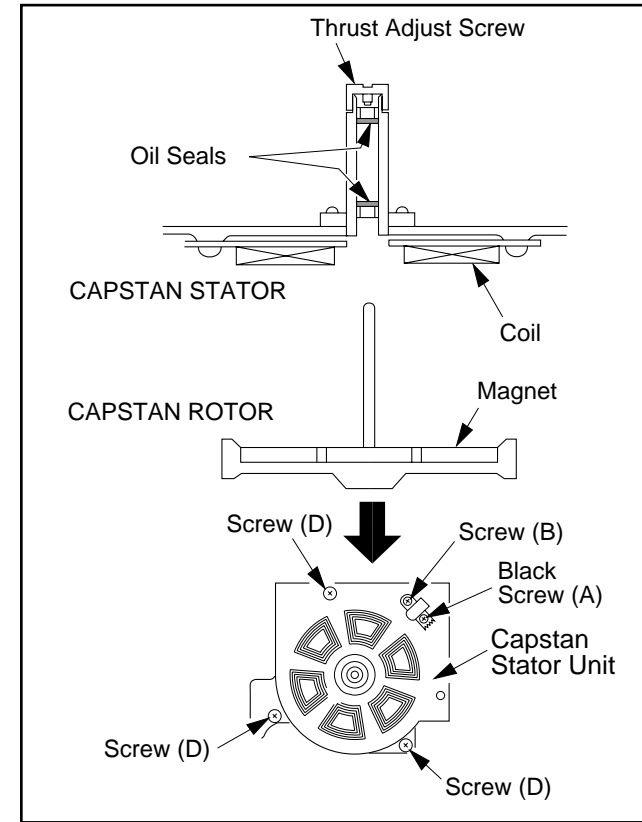


Fig. M19

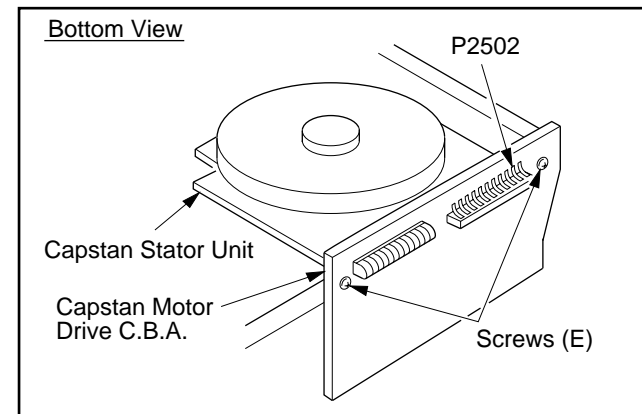


Fig. M20.

4. Carefully unsolder P2502 on the Capstan Motor Drive C.B.A.. Then remove the Capstan Motor Drive C.B.A. by removing 2 Screws (E) shown in Fig. M20.
5. Remove 3 Screws (D), Black Screw (A) and Screw (B). Then lift out the Capstan Stator Unit.
6. Install the new Capstan Stator Unit and then tighten 3 Screws (D), Black Screw (A) and Screw (B).
7. Before installing the new Capstan Rotor Unit, loosen the Thrust Adjust Screw completely.
8. Install the new Capstan Rotor, carefully inserting the Oil Seals as shown in Fig. M19.

**Caution Note :**

- 1) The replacement Capstan Rotor Unit is available only as a complete unit with a spring loaded Capstan Pulley.
  - 2) Hold the new Capstan Rotor Unit firmly when installing it, so the rotor will not be pulled toward the stator too quickly (due to magnetic force). Placing some paper on the coils before rotor installation may prevent accidental damage to the coils if the above caution is not observed.
  - 3) During installation, do not touch the Capstan Shaft with any hard material like drivers or tweezers.
9. Re-install the Capstan Motor Drive C.B.A. by tightening 2 Screws (E). Then carefully solder P2502 and re-install the Motor Block Ass'y.

**ADJUSTMENT OF THRUST ADJUST SCREW AND OIL SEALS**

10. Re-install the Capstan Belt and, while exerting pressure to turn the Clutch Unit, tighten the Thrust Adjust Screw slowly until the Capstan Rotor just starts turning.
11. At the point where the Capstan Rotor starts turning, tighten the Thrust Adjust Screw another 180° clockwise.
12. Upon completion of the above procedure, confirm that the Oil Seals are positioned as shown in Fig. M21 and make sure that the oil seal does not contact the Pressure Roller or P5 Arm Unit. Then, wipe off the Capstan Shaft to remove oil, grease, and dust.

**Note :**

Clean the Capstan Post whenever an Oil Seal is moved.

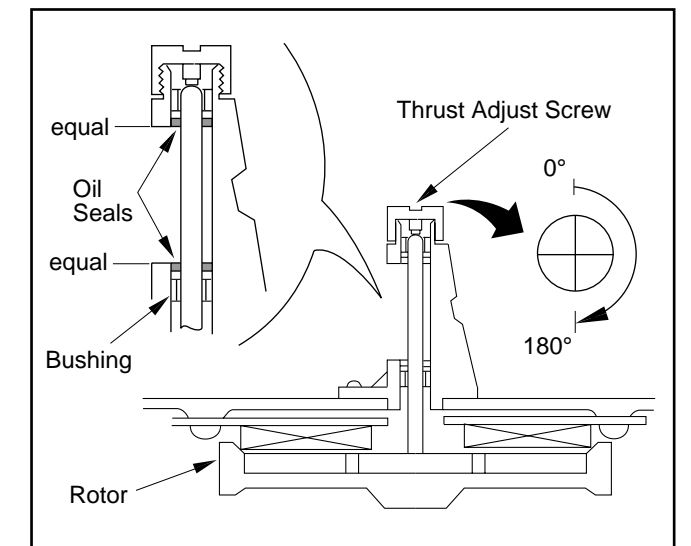


Fig. M21

## DISASSEMBLY/ASSEMBLY PROCEDURES OF MECHANISM

Mechanical Disassembly is performed with the Back Cover, TV Stereo Amp C.B.A. : Model K, Top Shield Plate Ass'y, TV Main C.B.A., VCR Main C.B.A. and the Cassette Up Ass'y removed. Also, all the following procedures for adjustment and parts replacement should be performed in EJECT position. (Refer to Fig. A1, B1, Page 2-24, 2-27.) Follow the steps in reverse order for reassembly.

Step /Loc. No.	Prior Step (s)	Part	Fig. No.	Remove	Note
①	-	Pressure Roller Arm Unit	T J1 J3	(C-1)	1,8, 10
②	-	Second Cam Gear	T J1	(C-2)	1,8
③	1	Pinch Lift Cam	T J1 J4	(L-1)	1
④	-	P5 Arm Unit	T J1 J5	(N-1), (W-1), (P-1)	1,11
⑤	1, 2, 3, 4	P5 Sector Gear	T J1 J5	-----	1
⑥	-	A/C Head Unit	T J1 J6	(S-1), (S-2) 2(W-2), (W-3), (W-4), P1541	2
⑦	-	Brake Ass'y	T J1 J7	2(P-2), (P-3), 2(L-2), 2(L-3)	3,12
⑧	-	Tension Arm Unit	T J1 J8	(P-4), (L-4)	4
⑨	-	Takeup Reel Table Unit	T J1	(L-5)	5
⑩	-	Supply Reel Table Unit	T J1	(L-6)	5
⑪	-	Motor Block Ass'y	B J2 J9	Capstan Belt, 2(S-3), Unsolder	1,13
⑫	-	Clutch Unit	B J2 J10	(C-3)	8
⑬	7, 11, 12	Secondary Rod Unit	B J2 J11	(P-5)	9
⑭	7, 11, 12,13	Main Rod	B J2 J12	(W-5), 2(L-7)	1,8

↑ A    ↑ B            ↑ C            ↑ D    ↑ E            ↑ F            ↑ G

Step /Loc. No.	Prior Step (s)	Part	Fig. No.	Remove	Note
⑮	7, 11, 12,13, 14	Loading Arm T Unit	B J2 J13	-----	1
⑯	7, 11, 12,13, 14	Loading Arm S Unit	B J2 J13	(L-8)	1
⑰	7, 11, 12,13	Center Block Unit	T J1	2(S-4)	-
⑱	1	Capstan Holder Unit	T J1	3(S-5)	6
⑲	-	Not Used	-	-----	-
⑳	-	FE Head Unit	T J1 J15	(S-6), Flat Cable	-
㉑	-	P1 Roller	T J1 J15	(C-5)	8
㉒	-	Cylinder Unit	T J2 J16	3(S-7), 2(S-8), Unsolder, Head Amp Ass'y	7
㉓	11	Capstan Rotor Unit	B J2 J17	-----	6
㉔	11, 24	Capstan Stator Unit	B J2 J17	3(S-9), 2(S-10), Unsolder	6
㉕	-	Loading Post Base T Unit	T J1	2(S-11), Post Stopper, Slide to rear to remove	-
㉖	-	Loading Post Base S Unit	T J1	2(S-12), Post Stopper, Slide to rear to remove	-

Note : Refer to Exploded Views for Lubrication Information.

### TOP VIEW

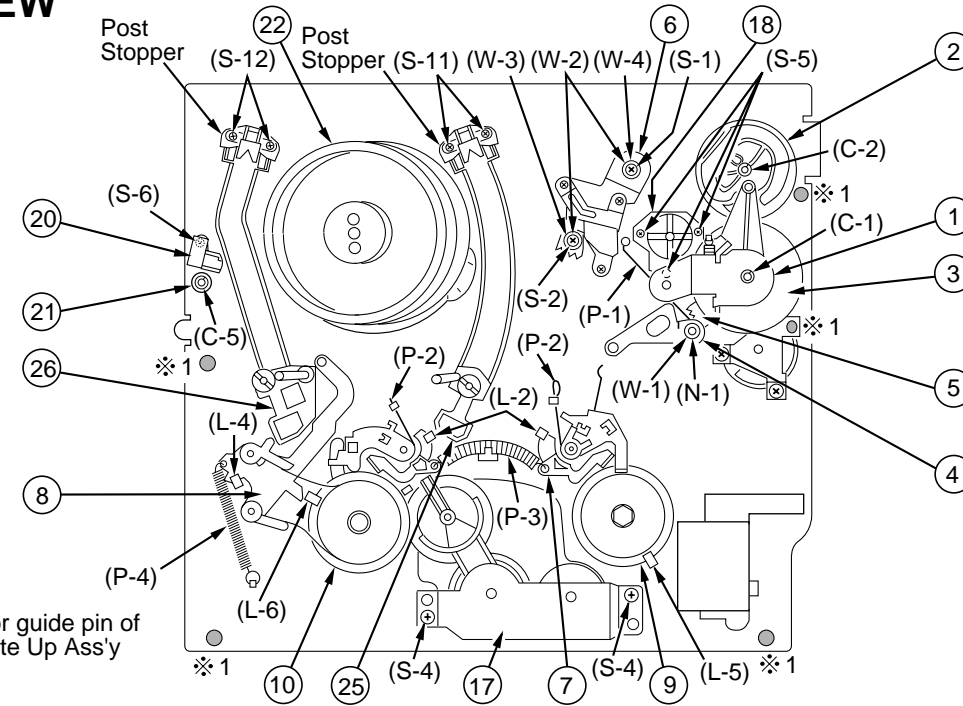


Fig. J1

### BOTTOM VIEW

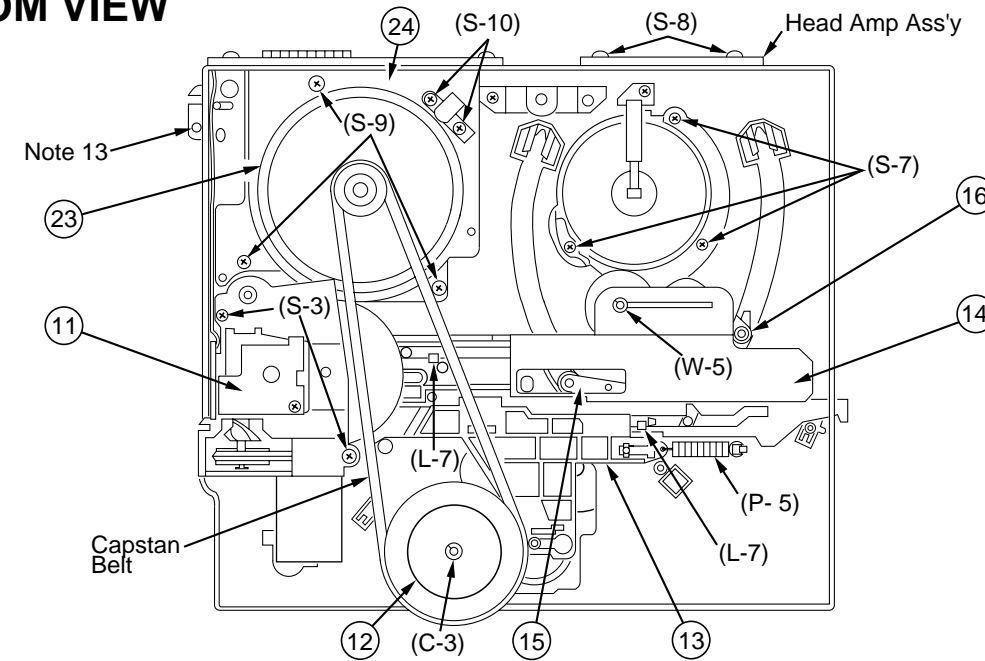


Fig. J2

#### Reference <Notes> in chart, page 2-19 :

- Alignment is necessary. Refer to Alignment Procedure, Page 2-24 and 2-25.
  - See "Horizontal Position Adjustment of A/C Head," Page 2-16.
  - Set pins of Brake Ass'y as shown in Fig. J7, Page 2-21.
  - See "Position Adjustment of Tension Post," Page 2-11.
  - See "Height Adjustment of Reel Tables," Page 2-12.
  - See "Replacement of Capstan Rotor or Stator Unit," Page 2-17.
  - See "Replacement of Cylinder Unit," Page 2-10.
  - This cut washer is not reusable. If removed, install a new one.
  - 1) Remove Brake Ass'y, Motor Block Ass'y and Clutch Unit.  
2) While holding down the Lift Gear, slide the Secondary Rod Unit for removal.
  - Position the Pressure Roller Arm Unit so that the guide fits onto the guide rib of the Capstan Holder Unit for installation.
- Important Note :**
- As an ESD countermeasure, make sure the spring is in contact with the base of the P4 post as shown in Fig. J5, Page 2-21.
  - As an ESD countermeasure, make sure the spring is in contact with the chassis as shown in Fig. J7, Page 2-21.
  - When installing the Motor Block Ass'y, make sure the Flat Cable is positioned so as to be out of the path of the Cassette Up Ass'y screw.

#### How to read chart shown above :

- Ⓐ : Order of steps in Procedure.  
When reassembling, perform the step(s) in the reverse order.  
These numbers are also used as the identification (location) No. of parts in Figures.
- Ⓑ : Steps to be completed prior to the current step.
- Ⓒ : Part to be removed or installed.
- Ⓓ : Location of part.  
T=Top B=Bottom
- Ⓔ : Fig. No. showing Procedure or Part Location.
- Ⓕ : Identification of part to be removed, unhooked, unlocked, released, unplugged, unclamped, or unsoldered.  
(P-1) = Spring(P-1);            3(S-1) = 3 Screws(S-1);    3(W-1) = 3 Washers(W-1);  
(C-1) = Cut Washer(C-1);    (N-1) = Nut(N-1);            2(L-1) = 2 Locking Tabs(L-1)
- Ⓖ : Adjustment information for installation and removal.

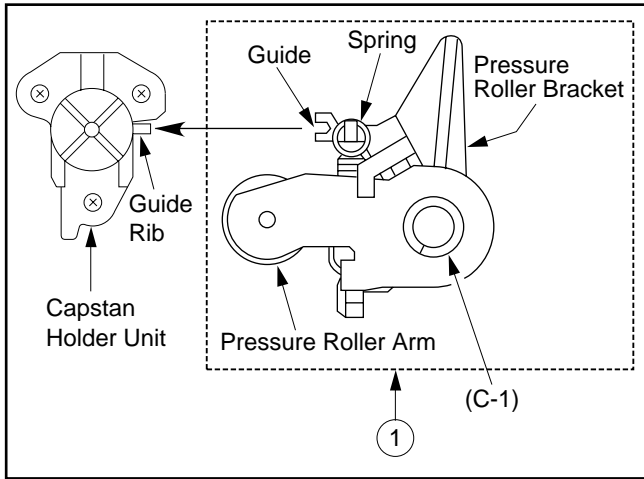


Fig. J3

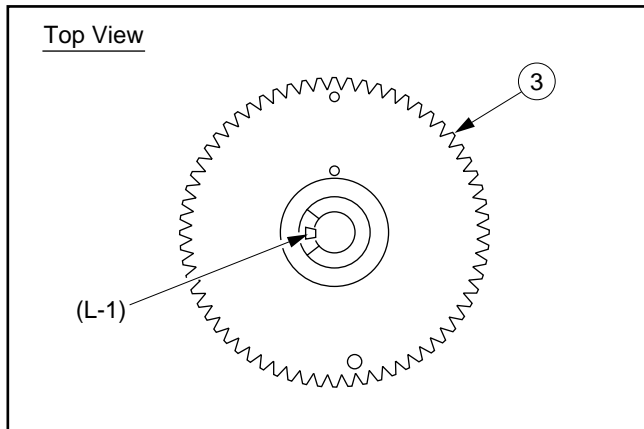


Fig. J4

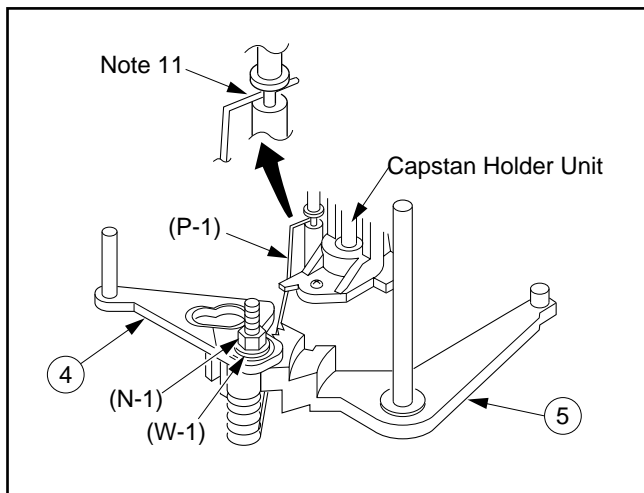


Fig. J5

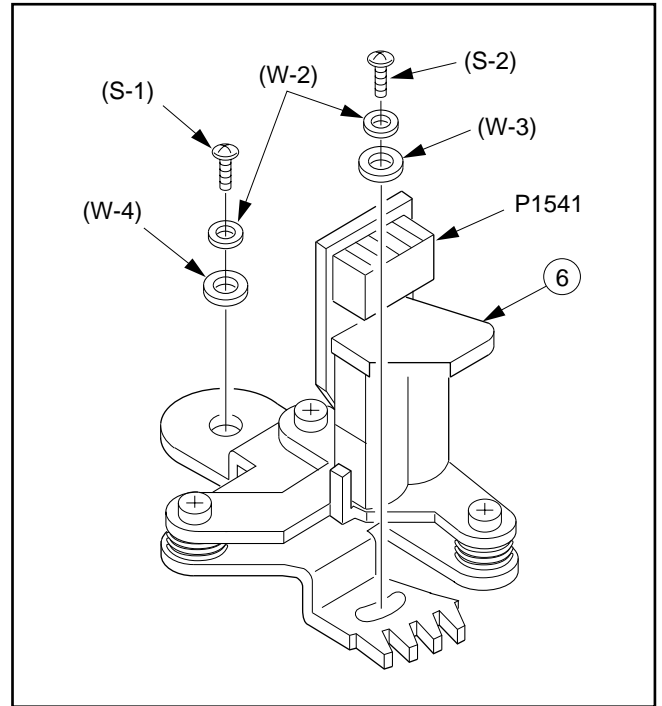


Fig. J6

Main Brake Spring/Soft Brake Springs Hook Positions

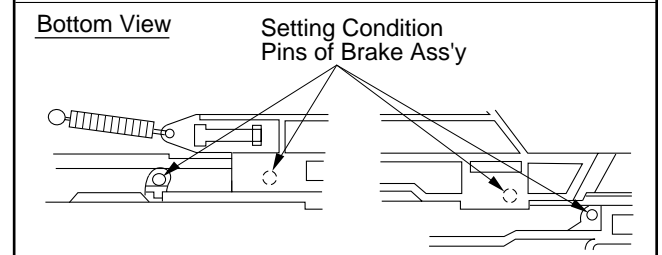
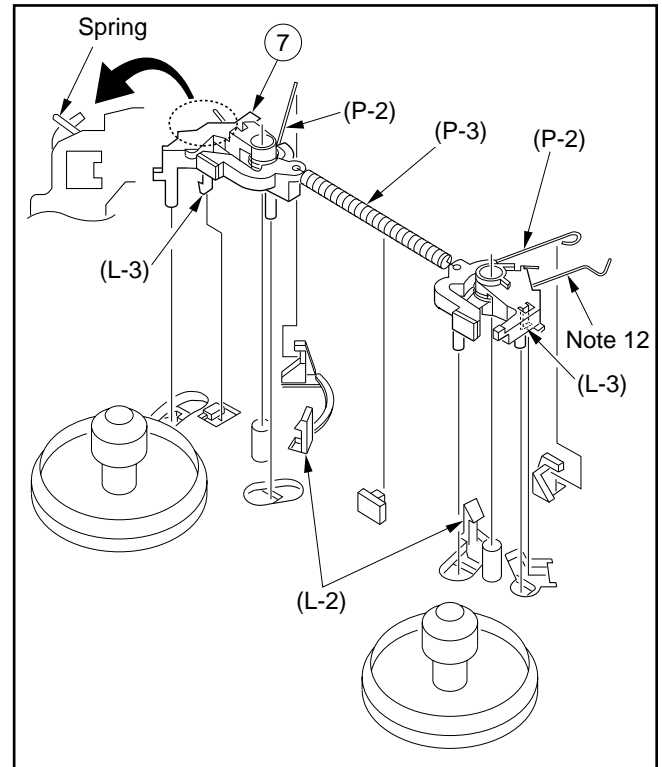


Fig. J7



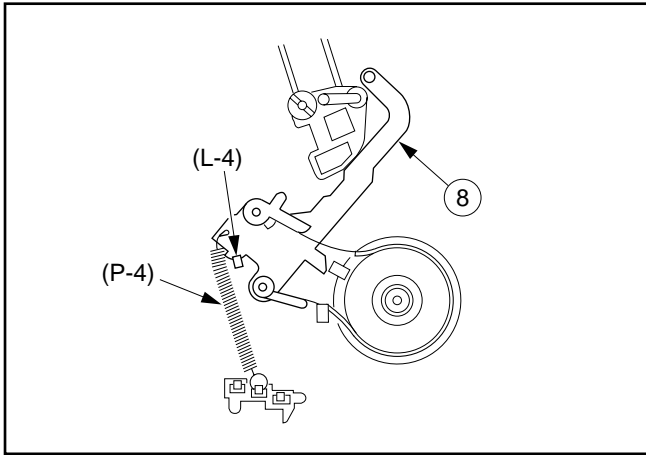


Fig. J8

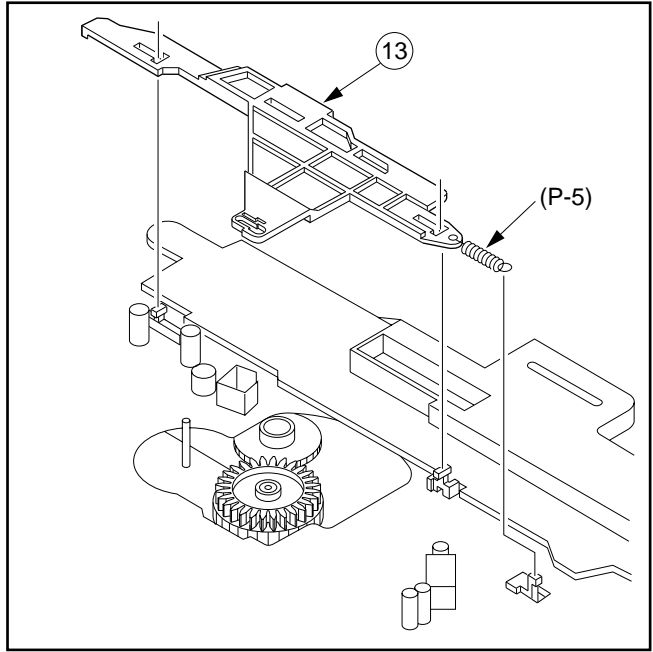


Fig. J11

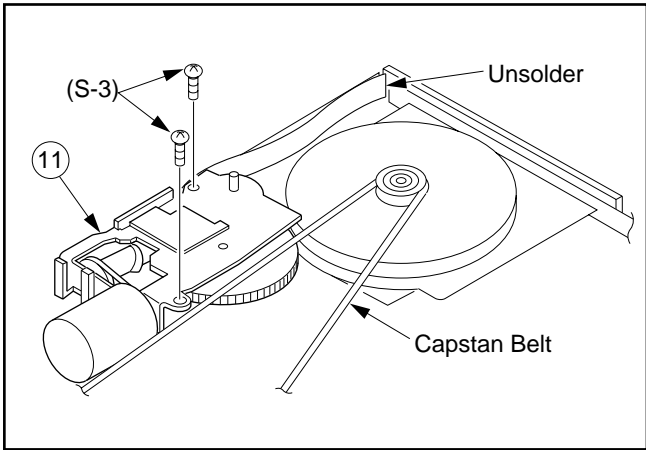


Fig. J9

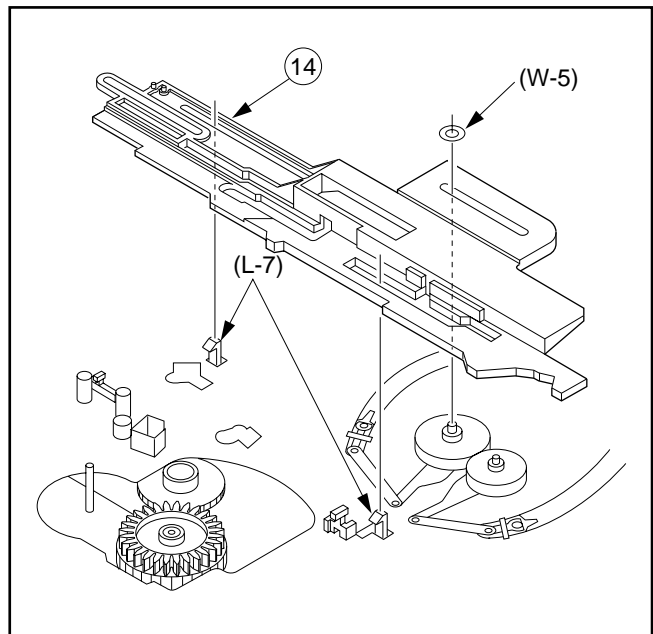


Fig. J12

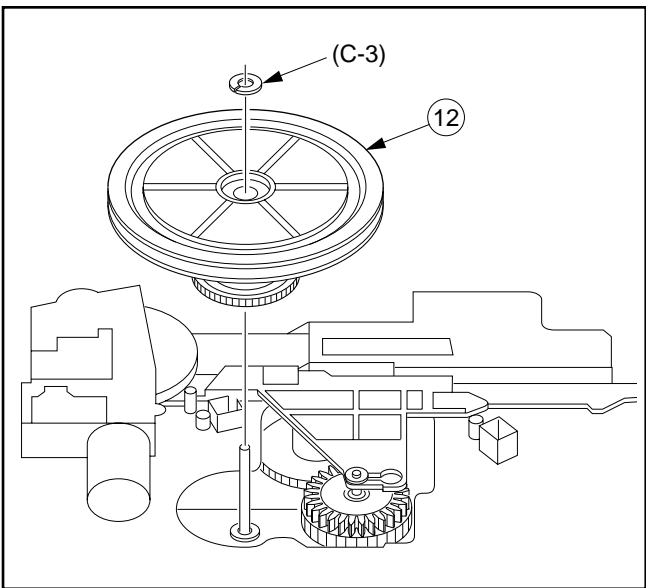


Fig. J10

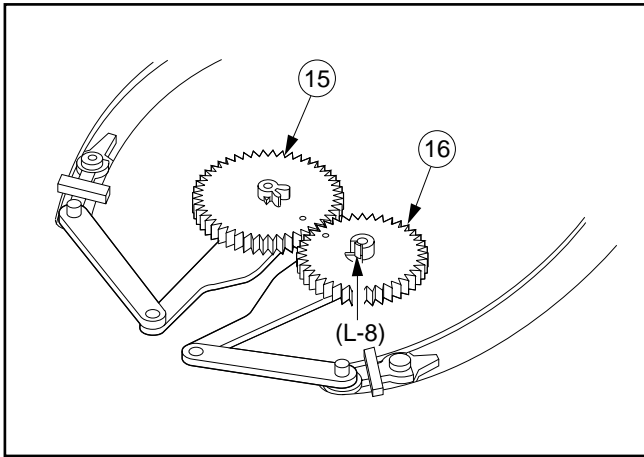


Fig. J13

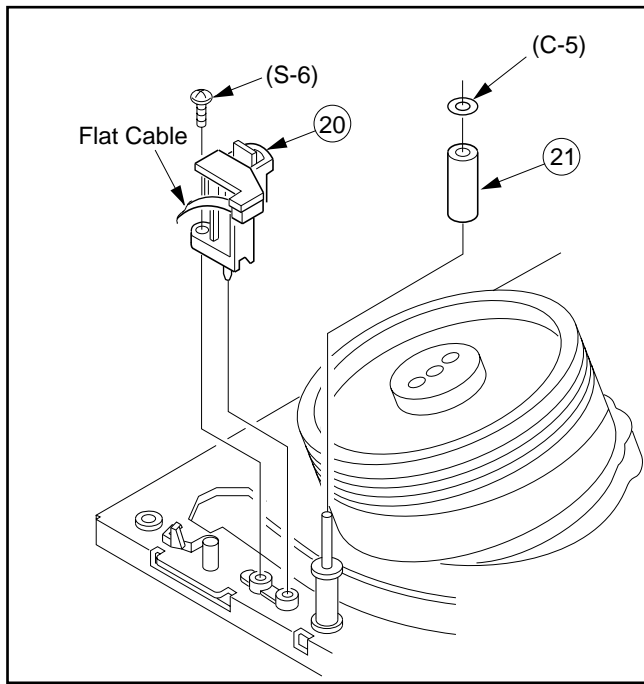
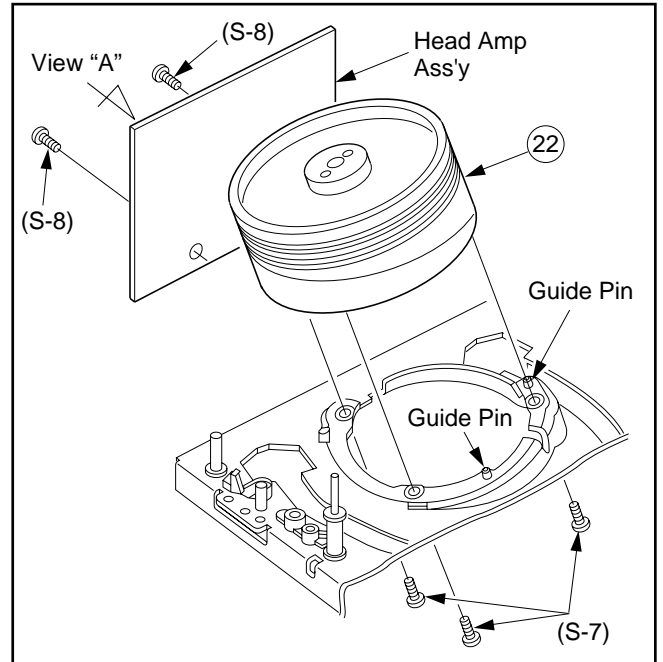


Fig. J15



View "A"

Head Amp Ass'y

Unsolder

Fig. J16

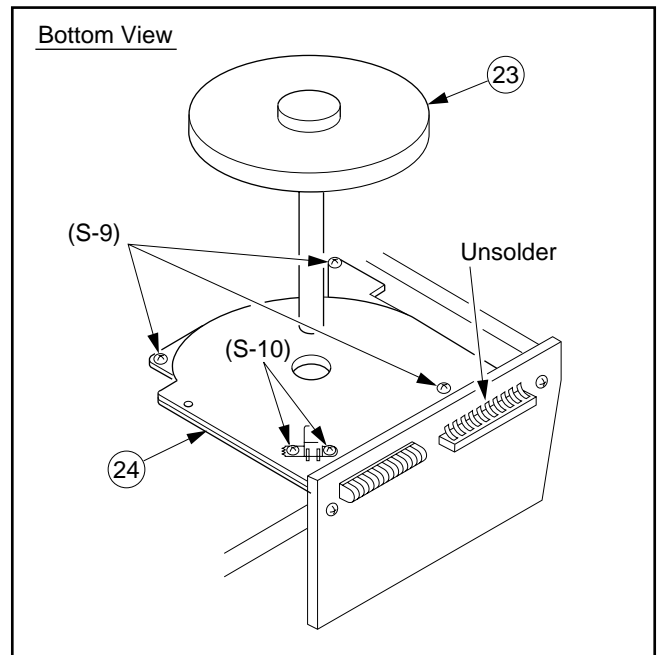


Fig. J17

## ALIGNMENT PROCEDURES OF MECHANISM

The following procedures describe how to align the individual gears and levers that make up the tape loading/unloading mechanism. Since information about the state of the mechanism is provided to the System Control Circuit only through the Mode Select Switch, it is essential that the correct relationship between individual gears and levers be maintained. All alignments are to be performed with the mechanism in the Eject mode, in the sequence given. Each procedure assumes that all previous procedures have been completed.

### Important Note :

If any one of these alignments is not performed properly, even if off by only one tooth, the unit will unload or stop and it may result in damage to the mechanical or electrical parts.

### Alignment points in Eject Position :

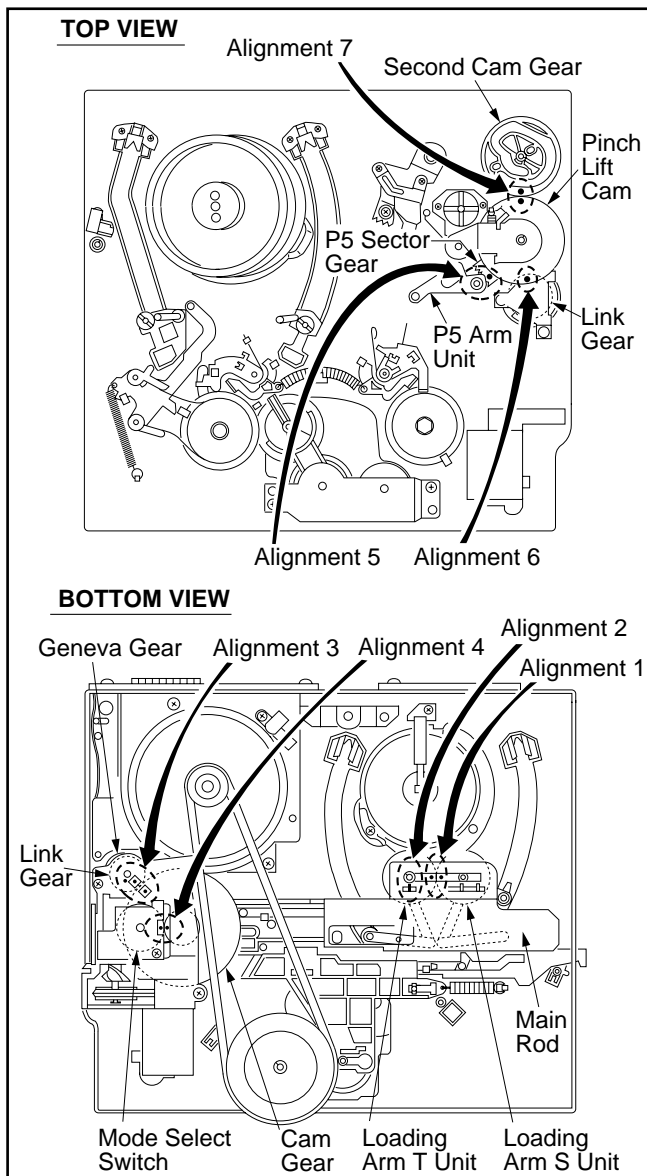


Fig. A1

## (ALIGNMENT 1) LOADING ARM T UNIT AND LOADING ARM S UNIT

1. Place the P2 and P3 posts to the unloading position.
2. Install the Loading Arm T Unit and the Loading Arm S Unit so that the hole on the Loading arm T Unit is aligned with the hole on the Loading Arm S Unit.

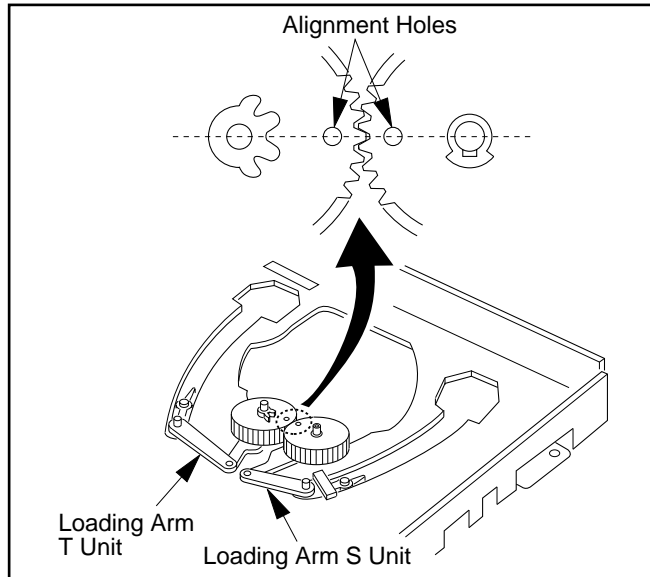


Fig. A2

## (ALIGNMENT 2) MAIN ROD AND LOADING ARM T UNIT

1. Install the Main Rod so that the rib on the Main Rod aligns with the shaft of the Loading Arm T Unit. Make sure that the shafts of the Brake Ass'y are positioned as shown in Fig. A3.

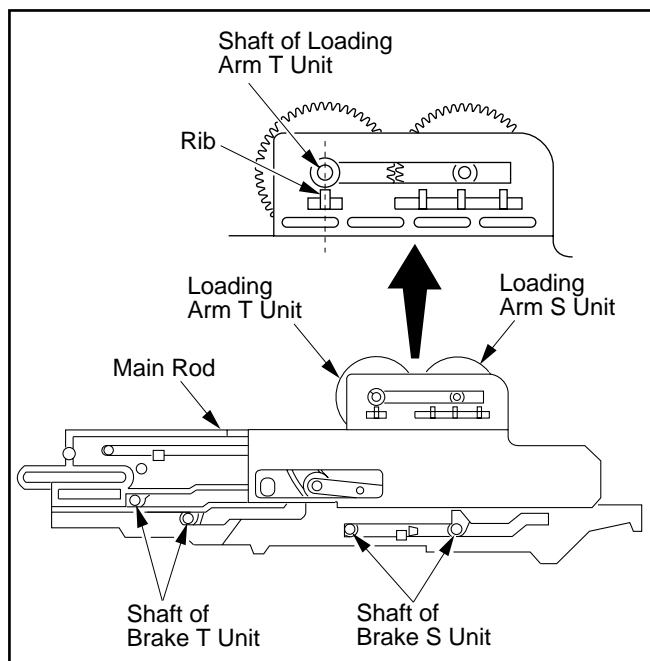


Fig. A3

**(ALIGNMENT 3)  
CAM GEAR, LINK GEAR AND GENEVA GEAR**

1. First, install the Geneva Gear, then the Cam Gear as shown in Fig. A4.
2. Turn the Loading Pulley of the Motor Block Ass'y in the direction shown by arrow in Fig. A5 so that the holes on the Geneva Gear and Cam Gear are aligned with holes on the Motor Bracket as shown in Fig. A4, A5.

Alternate method :

First, align the hole of the Cam Gear with the hole of the Geneva Gear as shown in Fig. A5.  
Then, carefully install the Cam Gear and the Geneva Gear together onto the Motor Bracket.

3. Install the Link Gear so that the holes are aligned with the holes on the Geneva Gear and Motor Bracket.

**(ALIGNMENT 4)  
MODE SELECT SWITCH AND CAM GEAR**

1. Install the Mode Select Switch so that the indentation on the Mode Select Switch aligns with the indentation on the Cam Gear. Refer to Fig. A4.

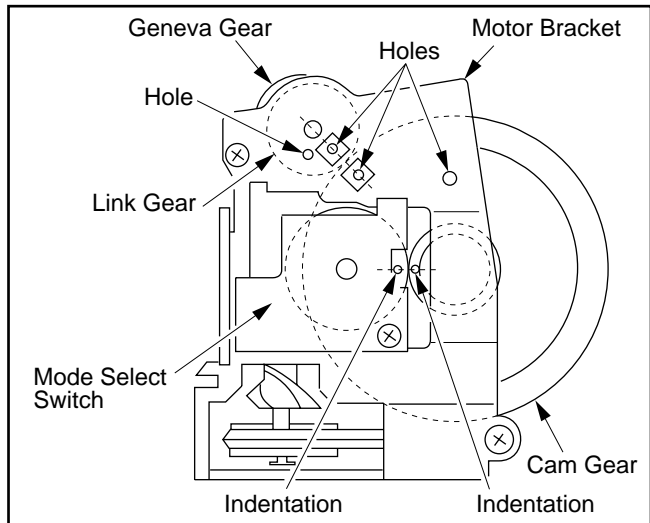


Fig. A4

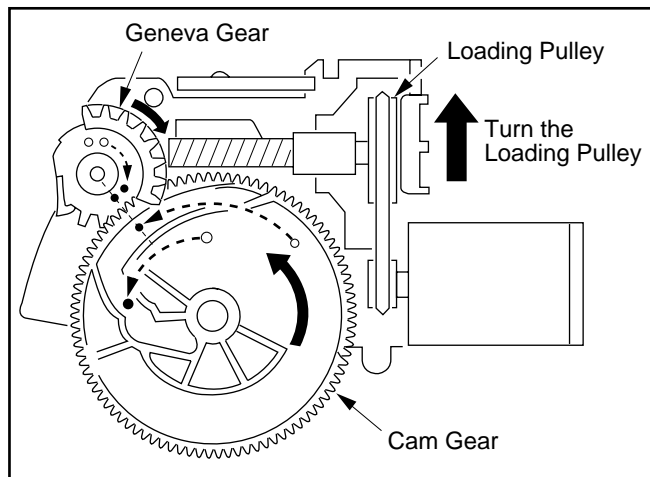


Fig. A5

**(ALIGNMENT 5)  
P5 SECTOR GEAR AND P5 ARM UNIT**

1. Install the P5 Sector Gear.
2. Install the P5 Arm Unit so that the last tooth of the gear is just outside the teeth of the P5 Sector Gear as shown in Fig. A6.

**(ALIGNMENT 6)  
PINCH LIFT CAM AND LINK GEAR**

1. Install the Motor Block Ass'y.
2. Confirm that the last tooth of Geneva Gear aligns with the triangle mark on chassis.
3. Install the Pinch Lift Cam so that the through hole on the Pinch Lift Cam is aligned with the hole on the Link Gear as shown in Fig. A6.  
If not, perform alignment 3 and 4.

**(ALIGNMENT 7)  
SECOND CAM GEAR AND PINCH LIFT CAM**

1. Install the Second Cam Gear so that the hole on the Second Cam Gear is aligned with the holes on the Pinch Lift Cam as shown in Fig. A6.

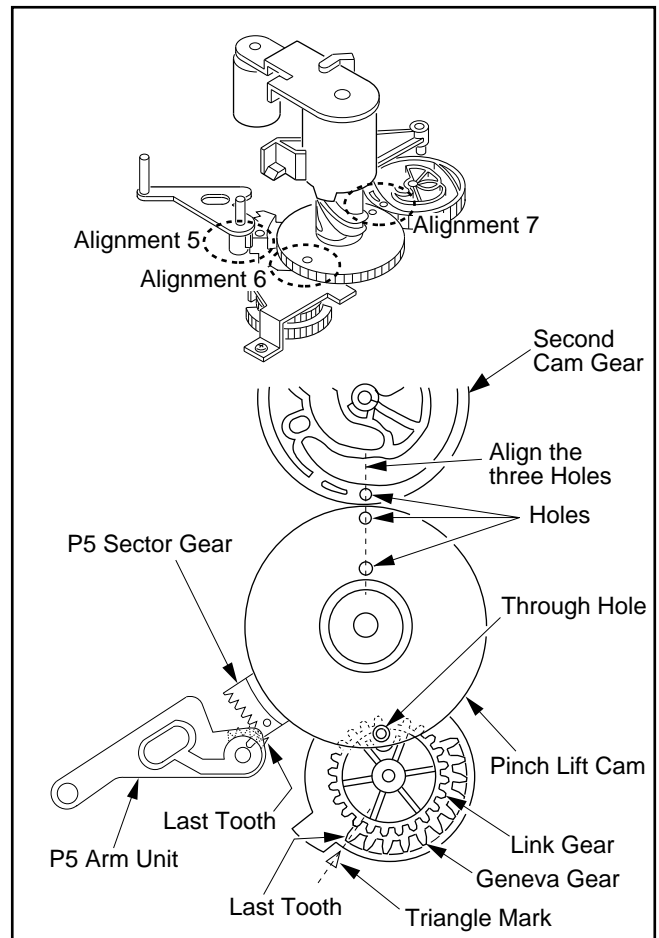


Fig. A6

## DISASSEMBLY / ASSEMBLY PROCEDURES OF CASSETTE UP ASS'Y

When reassembling, follow the steps in reverse order.

Step /Loc. No.	Prior Step (s)	Part	Fig. No.	Remove	Note
①	-	Top Plate Ass'y	K1	(S-1), 2(L-1)	-
②	-	Wiper Arm L Unit	K2	(S-2), (L-2)	1
③	2	Main Shaft Gear L	K2	-----	1
④	-	Wiper Arm R Unit	K3	(S-3), (L-3)	1
⑤	2, 3, 4	Main Shaft Unit	K3	-----	1
⑥	4	Cassette Door Opener	K3	(L-4)	-
⑦	1, 2, 3 4, 5	Cassette Guide Ass'y	K4	2(L-5)	2
⑧	1, 2, 3 4, 5, 7	Cassette Holder Unit	K4	-----	-
⑨	2, 4	Cassette Opener	K4	Slide Rack Ass'y	1

### List of Abbreviations :

(S-1) = Screw(S-1); 2(L-1) = 2 Locking Clips(L-1)

### Reference <Notes> in chart :

- Alignment is necessary.  
Refer to Alignment Procedure, Page 2-27 and 2-28.

### Important Note :

- As an ESD countermeasure, make sure the spring is in contact with the chassis as shown in Fig. K1.

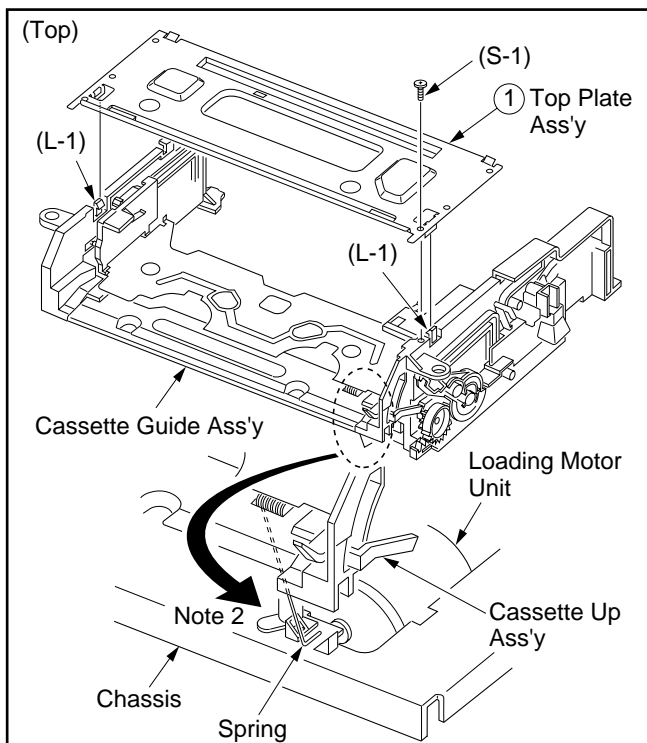


Fig. K1

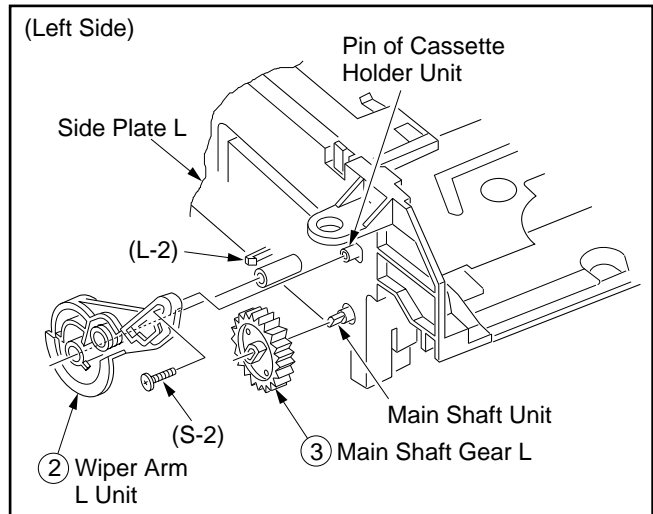


Fig. K2

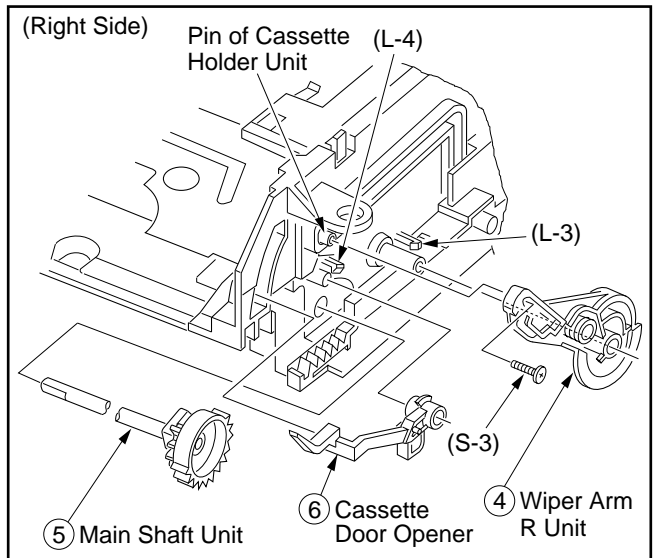


Fig. K3

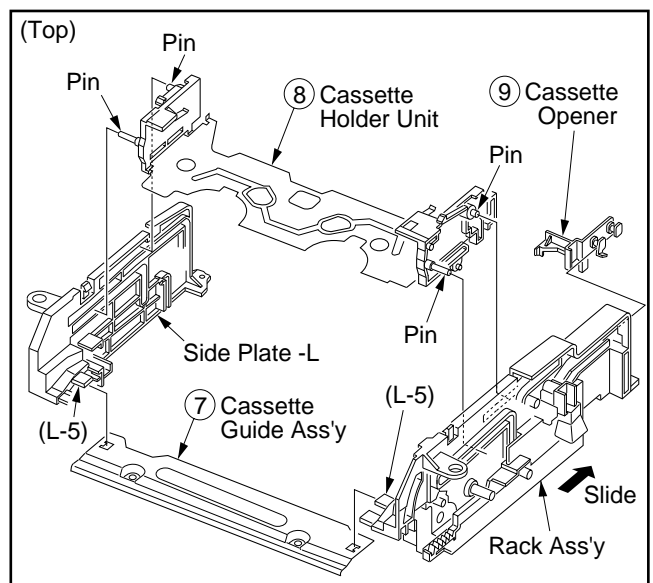


Fig. K4

## ALIGNMENT PROCEDURES OF CASSETTE UP ASS'Y

The following procedures describe how to align the individual gears and levers of Cassette Up Ass'y.  
All alignments are to be performed with the Cassette Up Ass'y in the Eject position.

Alignment points in Eject position :

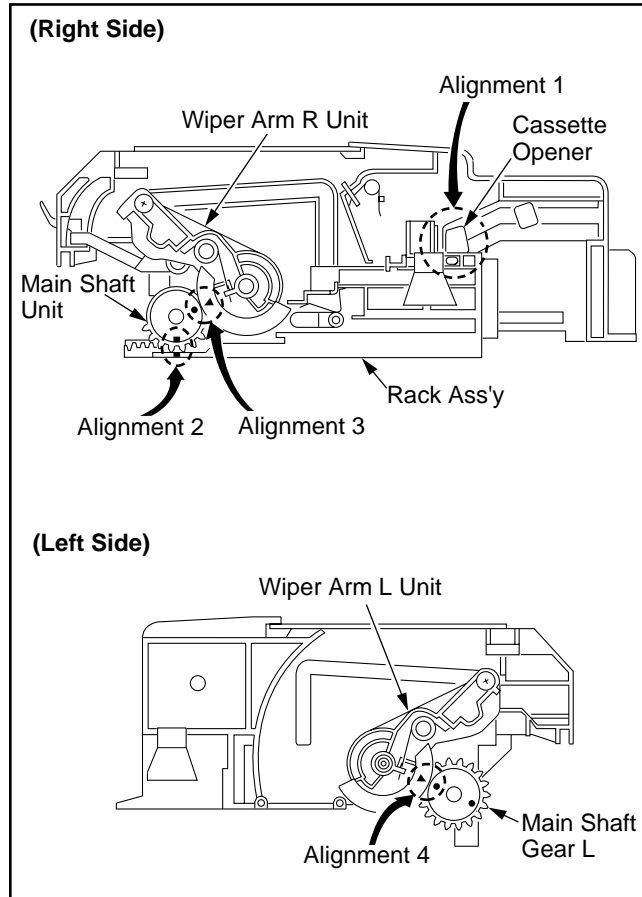


Fig. B1

## (ALIGNMENT 1) CASSETTE OPENER AND RACK Ass'y

1. Install Cassette Opener into Side Plate R Ass'y slot and slide it to the far end of the slot.
2. Slide the Rack Ass'y in the direction shown by arrow so that the nipple of Cassette Opener is inside the slot of Rack Ass'y as shown in Fig B2.

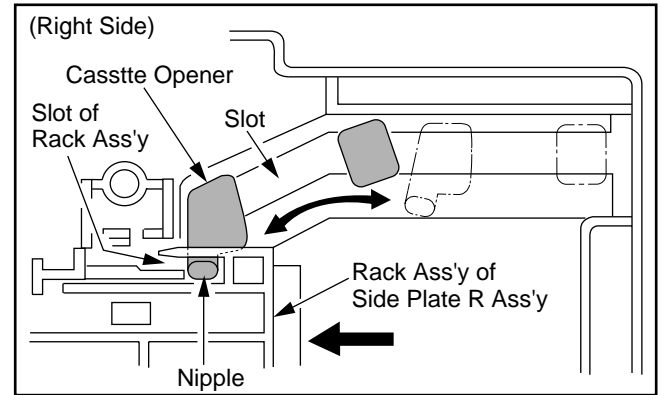


Fig. B2

## (ALIGNMENT 2) MAIN SHAFT UNIT AND RACK Ass'y

1. Install the Main Shaft Unit so that the projection on the Main Shaft Unit is aligned with the groove on the Rack Ass'y as shown in Fig. B3.

## (ALIGNMENT 3) WIPER ARM R UNIT AND MAIN SHAFT UNIT

1. Position the pin of Cassette Holder Unit to the far left of the Side Plate R Ass'y slot.
2. Install the Wiper Arm R Unit so that the ▽ mark on the Wiper Arm R Unit is aligned with the hole on the Main Shaft Unit as shown in Fig. B3.

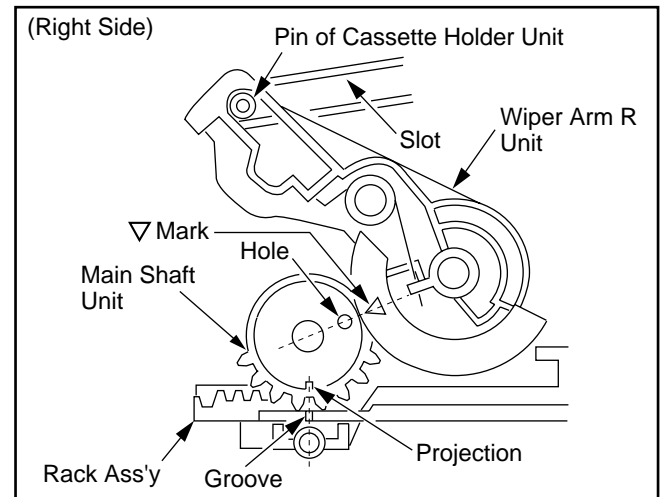


Fig. B3

**(ALIGNMENT 4)  
WIPER ARM L UNIT AND MAIN SHAFT  
GEAR L**

1. Install the Main Shaft Gear L and Wiper Arm L Unit so that  
▽ mark on the Wiper Arm L Unit is aligned with the holes  
on the Main Shaft Gear L as shown in Fig. B4.

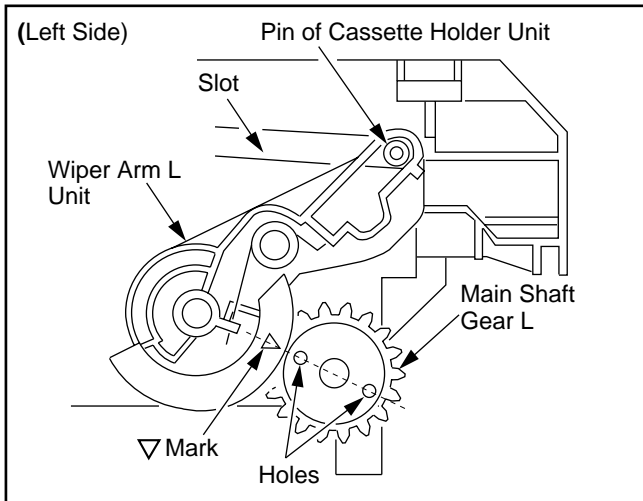


Fig. B4

**HOW TO INSTALL CASSETTE UP ASS'Y  
ONTO MECHANISM CHASSIS**

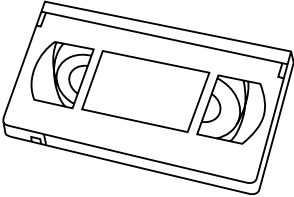
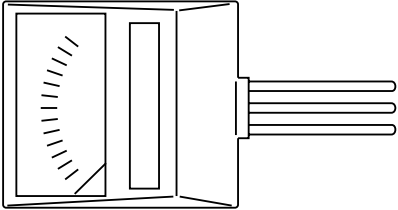
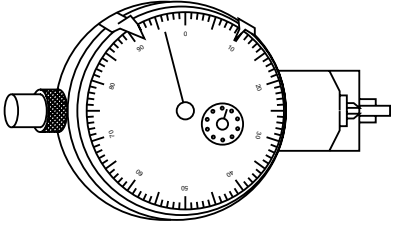
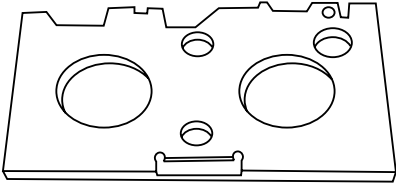

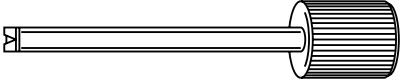
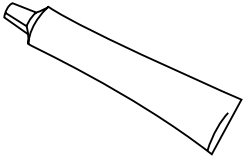
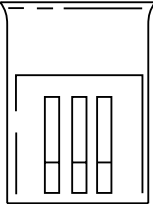
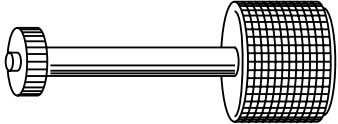
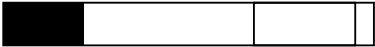
1. Confirm that the Cassette Up Ass'y and the mechanism are  
in the **Eject** position. (See Fig. A1, B1)
2. Carefully install the Cassette Up Ass'y onto the chassis so  
that all five guide pins fit into chassis holes (See Fig. J1),  
and the sensors fit into the Sensor Covers.

Note :

Be sure to maintain the Eject position of Cassette  
Up Ass'y during installation. To do this, hold the  
Cassette Holder Unit plate and the Cassette Guide  
Ass'y plate so there is no movement when installing.

3. Install the 4 Red Screws as shown in Fig. D10, Page 2-4 or  
2-8.
4. Confirm loading operation manually and then confirm proper  
operation with the power on.

## B. SERVICE FIXTURES AND TOOLS

<p><b>VFMS0001H6 VHS Alignment Tape</b></p> 	<p><b>Back Tension Meter (Made in USA., Purchase Locally)</b></p> 	<p><b>VFKS0009 Reel Table Height Fixture</b></p> 
<p><b>VFKS0010 Post Adjustment Plate</b></p> 	<p><b>VFKS0081 Grease</b></p> 	<p><b>VFK0329 Post Adjustment Screwdriver</b></p> 
<p><b>MOR265 Molytone Grease</b></p> 	<p><b>VFK27 Head Cleaning Stick</b></p> 	<p><b>VFKS0082 H-Position Adj. Screwdriver</b></p> 
<p><b>TSM10032-2 Permalloy Magnetic Strip</b></p>  <p>Model : H,I,J,K</p>		



# C. ELECTRICAL ADJUSTMENT PROCEDURES

## 1. TEST EQUIPMENT

To do all of these electrical adjustments, the following equipment is required.

1. Dual-Trace Oscilloscope  
Voltage Range : 0.001~50V/Div.  
Frequency Range : DC~50MHz  
Probes : 10:1, 1:1
2. NTSC Video Pattern Generator
3. DVM(Digital Volt Meter)  
Voltage Range : 0.01~50V
4. Plastic Tip Driver and Non-Metal Driver
5. Isolation Transformer (Variable)
6. VHS Alignment Tape (VFMS0001H6)
7. White Pattern Generator
8. White Balance Meter
9. MTS/SAP Signal Generator  
(TV Multi-Channel Sound Modulator (U.S.A.))

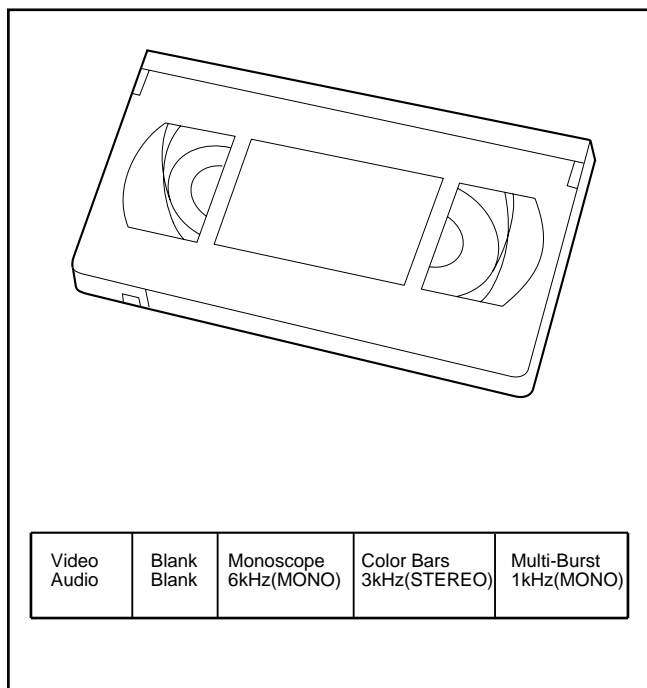


Fig. E1

## 2. HOW TO READ THE ADJUSTMENT PROCEDURES

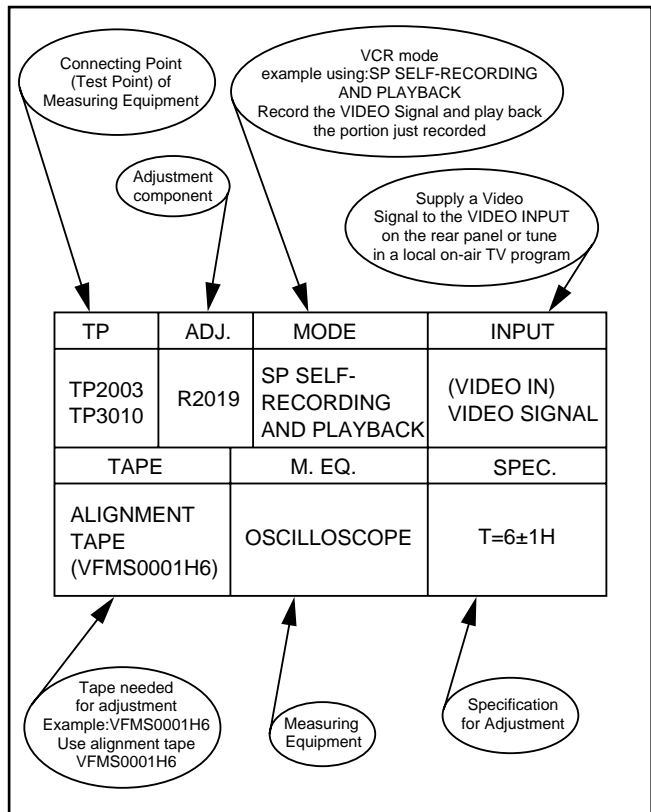


Fig. E2

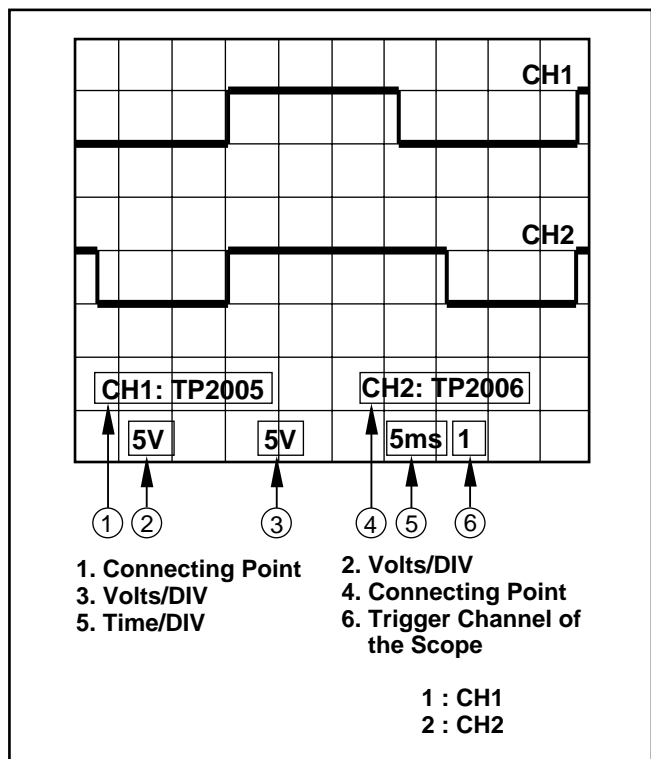


Fig. E3

Caution: Use an Isolation Transformer (Variable)

Because a Hot Chassis Ground is present in the Switched Mode Power Supply Circuit, an Isolation Transformer must be used. Also, in order to have the ability to increase the input voltage slowly, when troubleshooting this type of Power Supply Circuit, a variable Isolation Transformer is required.

### 3. ADJUSTMENT PROCEDURES

These adjustment procedures consist of the following sections.

1. Servo Section
2. OSD Section
3. TV Stereo Amp & MTS/SAP Section
4. TV Y/C Process, TV Main & CRT Section

#### SERVO SECTION

##### HEAD SWITCHING POSITION ADJUSTMENT (PG SHIFTER)

**Purpose:**  
Determine the Head Switching Point during Playback.

**Symptom of Misadjustment:**  
May cause Head Switching Noise and/or Vertical Jitter in the picture.

TP	ADJ.	MODE	INPUT
TP3001 TP6205	R6213	SP PLAYBACK	
TAPE		M.EQ.	SPEC.
ALIGNMENT TAPE (VFMS0001H6) COLOR BARS		OSCILLOSCOPE	T=6±1H (0.38±0.06msec)

- Note:**
- TP3001 : Video Signal Process Section on the VCR Main C.B.A. (Model : A,B,C,D,E,F,G,H,I,J,K) TV Y/C Process Section on the VCR Main C.B.A. (Model : L)
  - TP6205 : Video Signal Process Section on the VCR Main C.B.A.
  - R6213 : Servo Section on the VCR Main C.B.A.

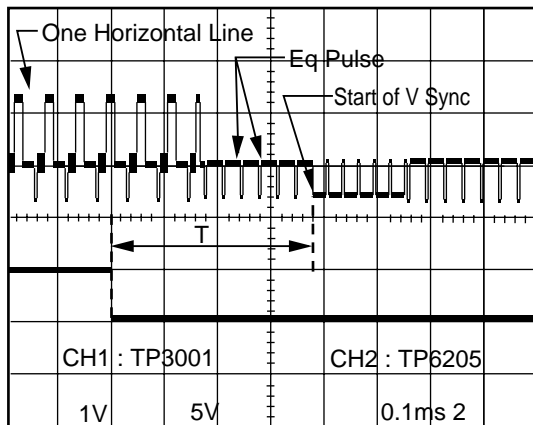


Fig. E4

#### OSD SECTION

##### OSD CLOCK FREE RUN FREQUENCY ADJUSTMENT

**Purpose:**  
To set the OSD clock free run frequency.

**Symptom of Misadjustment:**  
May make it so that on-screen and closed caption display do not appear.

TP	ADJ.	MODE	INPUT
TP3301	R3368	STOP	(Antenna Input Terminal or Video Input Jack) Any video signal such as color bar
TAPE	M.EQ.		SPEC.
	DVM (DIGITAL VOLT METER) NTSC VIDEO PATTERN GENERATOR		2.5 ± 0.1VDC

- Note :**
- TP3301, R3368 : OSD Section on the VCR Main C.B.A.
  - 1. Supply any video signal, such as color bar, to Antenna Input Terminal or Video Input Jack.
  - 2. Connect the DVM (Digital Volt Meter) to TP3301.
  - 3. Adjust R3368 (OSD CLOCK FREE RUN FREQUENCY) so that the voltage is 2.5 ± 0.1VDC.

#### TV STEREO AMP & MTA/SAP SECTION

Model : K,L

##### SEPARATION ADJUSTMENT

**Purpose:**  
To separate the L and R Channels of Stereo Signal.

**Symptom of Misadjustment:**  
The L and R Channels of Stereo Signal will not be separated properly resulting in no stereophonic effect.

Model : K

TP	ADJ.	MODE	INPUT
TP4901	R4901	STOP	(ANTENNA INPUT TERMINAL) MTS (ONLY L CH) 300Hz±5Hz 14% or 7% Modulating
TAPE	M.EQ.		SPEC.
	OSCILLOSCOPE MTS/SAP SIGNAL GENERATOR		Refer to Descriptions below

- Note :**
- TP4901, R4901 : TV Stereo Amp C.B.A.

1. Connect the RF OUTPUT of the MTS/SAP Signal Generator to the Antenna Input Terminal.
2. Connect the Oscilloscope to TP4901(R CH).
3. Adjust R4901 on the TV Stereo Amp C.B.A. so that the signal level is at minimum as shown in Fig. E5-1.

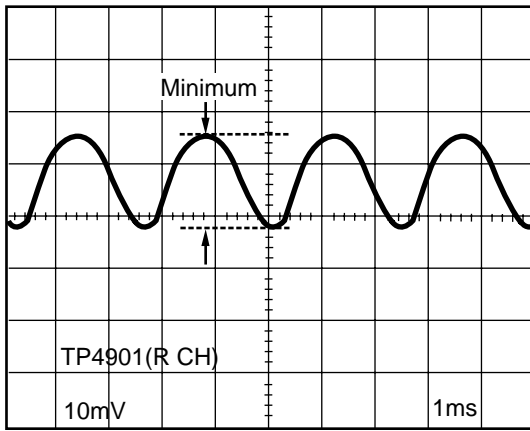


Fig. E5-1

Model : L

TP	ADJ.	MODE	INPUT
TP4702	R9001	STOP	(ANTENNA INPUT TERMINAL) MTS (ONLY L CH) 300Hz±5Hz 14% or 7% Modulating
TAPE	M.EQ.		SPEC.
	OSCILLOSCOPE MTS/SAP SIGNAL GENERATOR		Refer to Descriptions below

Note :

TP4702 : TV Stereo C.B.A.  
R9001 : VCR Main C.B.A.

1. Connect the RF OUTPUT of the MTS/SAP Signal Generator to the Antenna Input Terminal.
2. Connect the Oscilloscope to TP4702(R CH).
3. Adjust R9001 on the VCR Main C.B.A. so that the signal level is at minimum as shown in Fig. E5-2.

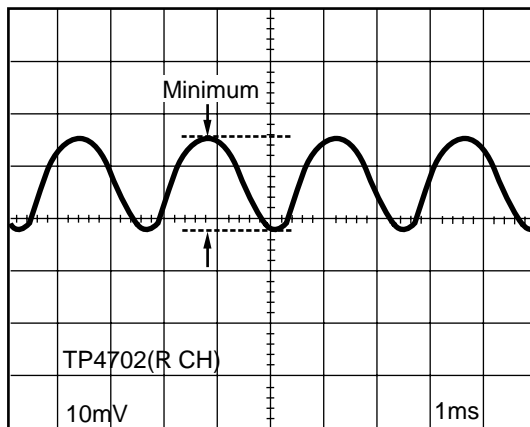


Fig. E5-2

## TV Y/C PROCESS, TV MAIN & CRT SECTION

### 1. SUB CONTRAST ADJUSTMENT

Purpose:

To set the optimum Sub Contrast Level.

Symptom of Misadjustment:

The picture is too dark or too light.

TP	ADJ.	MODE	INPUT
TP48	R5325	STOP	(VIDEO IN) CROSSHATCH PATTERN SIGNAL 1Vp-p (75Ω terminate)
TAPE	M.EQ.		SPEC.
	OSCILLOSCOPE NTSC VIDEO PATTERN GENERATOR		A=3.0 ± 0.1Vp-p

Note:

TP48 : CRT C.B.A.  
R5325 : TV Y/C Process Section on the VCR Main  
C.B.A.

(SETUP)

1. Reset the control levels to the factory -set levels using the remote control.
2. Turn R5907 (SUB BRIGHTNESS) fully counterclockwise for minimum level.

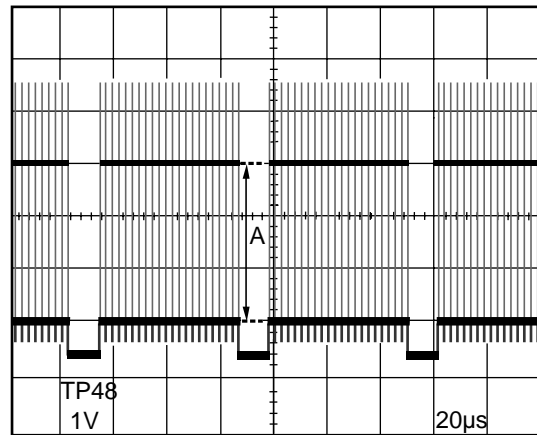


Fig. E6

## 2. FOCUS, SCREEN, CUT OFF, DRIVE ADJUSTMENT

**Purpose:**

To set the optimum Focus and Screen.

**Symptom of Misadjustment:**

The picture is out of Focus and there will be an improper screen color mix.

TP	ADJ.	MODE	INPUT
TP50	FOCUS CONTROL SCREEN CONTROL R363, R365, R369 R370, R371, R5907	STOP	(VIDEO IN) MONOSCOPE PATTERN SIGNAL
TAPE	M.EQ.	SPEC.	
/	OSCILLOSCOPE NTSC VIDEO PATTERN GENERATOR	Refer to Descriptions below	

**Note:**

Focus Control, Screen Control : Flyback Transformer  
 TP50, R363, R365, R369, R370, R371 : CRT C.B.A.  
 R5907 : TV Y/C Process Section on the VCR Main  
 C.B.A.

**(SETUP)**

1. Controls

R363, R365,  
 (B-, R-DRIVE VR) : Counterclockwise 45 degrees  
 from center on Component  
 Side, refer to Fig. E7-1.

R369, R370, R371  
 (B-,G-,R- CUT OFF VR) : Center

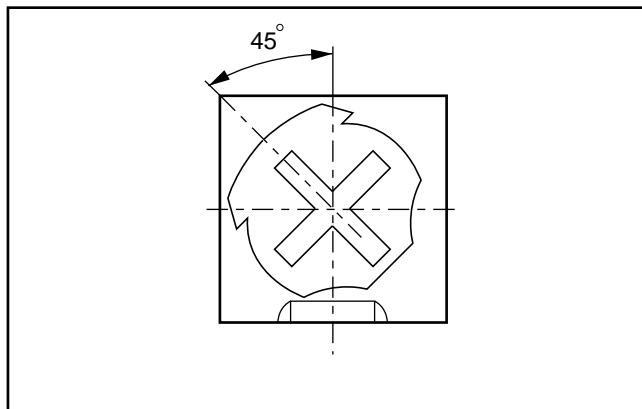


Fig. E7-1

1. Adjust the Focus Control on Flyback Transformer to Sharpest Picture position.
2. Turn the Screen Control on Flyback Transformer fully counterclockwise.
3. Set the Service Switch on the TV Y/C Process Section of the VCR Main C.B.A. to Service Position.
4. Adjust R5907 (SUB BRIGHTNESS) so that the level A becomes as follows;

A=150±5VDC (Model : A,B,C,D,E,F,G)

A=170±5VDC (Model : H,I,J,K)

A=195±5VDC (Model : L)

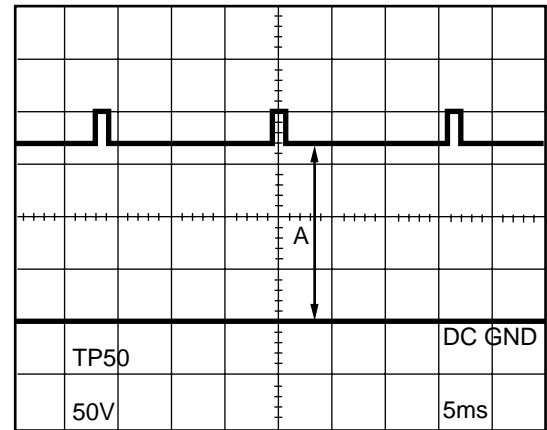


Fig. 7-2

5. Turn the Screen Control on Flyback Transformer clockwise carefully and stop at the point where any color is first observed.
6. Adjust R369 ((B-CUT OFF), R370 (G-CUT OFF) or R371 (R-CUT OFF)) VR of colors which are not observed in step 5 so that the Horizontal line is white.
7. Set the Service Switch to the Normal Position.
8. Adjust R5907(SUB BRIGHTNESS) so that the picture has adequate brightness.
9. Adjust R365(R-DRIVE) and R363(B-DRIVE) so that the whole screen is white.

## 3. TINT ADJUSTMENT

**Purpose :**

To set the standard color phase.

**Symptom of Misadjustment :**

Color phase will be shifted.

**(SETUP)**

Reset the control levels to the factory -set levels using the remote control.

TP	ADJ.	MODE	INPUT
TP48	R5927	STOP	(VIDEO IN) RAINBOW COLOR BAR
TAPE	M.EQ.	SPEC.	
/	OSCILLOSCOPE NTSC VIDEO PATTERN GENERATOR	A : B = 2 : 1	

**Note:**

TP48 : CRT C.B.A.

R5927 : TV Y/C Process Section on the VCR Main  
 C.B.A.

Turn R5927 (SUB TINT) on the TV Y/C Process Section of the VCR Main C.B.A. so that the waveform becomes A : B = 2 : 1.

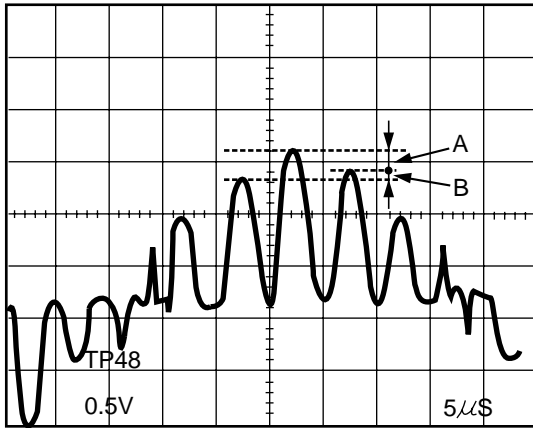


Fig. E8

#### 4. PURITY ADJUSTMENT

**Service Note for VV2706:**

Picture Tube Ass'y is preadjusted at factory and should not be disturbed unless absolutely necessary.

**Purpose:**

To set the uniform white over the whole screen.

**Symptom of Misadjustment:**

The white screen will vary from area to area.

TP	ADJ.	MODE	INPUT
	Pair of 4-Pole Magnets, Pair of 6-Pole Magnets, Pair of Purity Magnets, Deflection Yoke	STOP	(VIDEO IN) CROSSHATCH PATTERN SIGNAL & WHITE PATTERN SIGNAL
TAPE	M.EQ.		SPEC.
	NTSC VIDEO PATTERN GENERATOR/WHITE PATTERN GENERATOR DEGAUSSING COIL		Refer to descriptions below

**Note:**

Pair of 4-Pole Magnets, Pair of 6-Pole Magnets,  
Pair of Purity Magnets, Deflection Yoke : CRT Unit

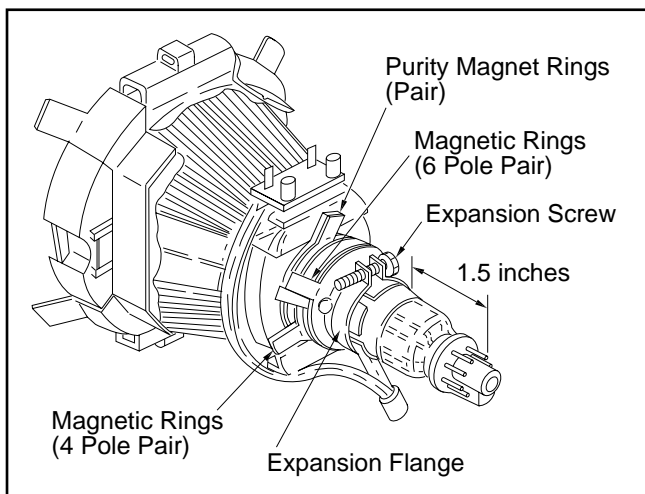


Fig. E9

1. Mount and secure Deflection Yoke so that the rear edge of expansion flange is 1.5 inches from the tips of the CRT pins as shown in Fig. E9.
2. Supply the Crosshatch Pattern Signal.
3. Degauss the CRT by the Degaussing Coil.
4. Adjust the pair of 4 - Pole Magnets so that B and R at the center of CRT overlap each other.
5. Adjust the pair of 6-Pole Magnets so that B and R which overlapped each other in Step 4 overlap G.
6. Supply the White Pattern Signal.
7. Remove the wedges from the CRT.  
Loosen the expansion screw on the Deflection Yoke, and move the Deflection Yoke toward the CRT.
8. Turn the R370 (G-CUT OFF) fully counterclockwise. Adjust the pair of Purity Magnets so that the distorted color areas are approximately across from each other. Move the Deflection Yoke carefully backward (without rotating it), until the distorted color areas disappear from the screen.
9. Supply Crosshatch Pattern Signal again. Confirm that the Center Bar is at the horizontal center line of the CRT and the V- Center Bar is at the vertical center line of the CRT. Then tighten the Expansion Screw.
10. Set the Service Switch on the TV Y/C Process Section of the VCR Main C.B.A. to Service Position. Adjust the R370 (G-CUT OFF) so that the Horizontal line is white.
11. Set the Service Switch to Normal Position. Make sure that the whole screen is white. If not, adjust R365 (R-DRIVE) and R363 (B-DRIVE).

#### 5. STATIC CENTRAL CONVERGENCE ADJUSTMENT

**Service Note for VV2706:**

Picture Tube Ass'y is preadjusted at factory and should not be disturbed unless absolutely necessary.

**Purpose:**

To set the uniform convergence over the whole screen.

**Symptom:**

The convergence on the screen will vary from the center portion to the surrounding edges.

TP	ADJ.	MODE	INPUT
	Pair of 4-Pole Magnets, Pair of 6-Pole Magnets	STOP	(VIDEO IN) CROSSHATCH PATTERN SIGNAL
TAPE	M.EQ.		SPEC.
	NTSC VIDEO PATTERN GENERATOR		Refer to descriptions below

**Note:**

Pair of 4 - Pole Magnets,  
Pair of 6 - Pole Magnets : CRT Unit

1. Adjust the Pair of 4 - Pole Magnets so that B and R, at center of CRT overlap each other.
2. Adjust the Pair of 6 - Pole Magnets so that B and R which overlapped each other in step 1 overlaps G.

## 6. DYNAMIC CONVERGENCE ADJUSTMENT

### Service Note for VV2706:

Picture Tube Ass'y is preadjusted at factory and should not be disturbed unless absolutely necessary.

### Purpose:

To set the uniform convergence over the whole screen.

### Symptom:

The convergence on the screen will vary at the sides of CRT.

TP	ADJ.	MODE	INPUT
	DEFLECTION YOKE	STOP	(VIDEO IN) CROSSHATCH PATTERN SIGNAL & WHITE PATTERN SIGNAL
TAPE	M.EQ.		SPEC.
	NTSC VIDEO PATTERN GENERATOR/WHITE PATTERN GENERATOR		Refer to descriptions below

### Note:

Deflection Yoke : CRT Unit

1. Supply the Crosshatch Pattern Signal.
2. Hold Deflection Yoke and wiggle it up and down to correct Crosshatch Pattern position (Refer to Fig. E10-1).
3. Hold Deflection Yoke and wiggle it right to left to correct Crosshatch Pattern position (Refer to Fig. E10-2).
4. Insert three wedges as shown in Fig. E10-3 to maintain the correct crosshatch pattern position.

### (Confirmation of white)

1. Supply White Pattern Signal.
2. Confirm purity.
3. If the purity is not sufficient, re-adjust purity.

Model : H,I,J,K

4. If the convergence error is more than 1.5mm (0.06 inch) from the green dot at each corner, adjust the convergence at that corner with a Permalloy Magnetic Strip\*. Insert a permalloy strip into the gap between the DY and CRT along a diagonal line of a CRT bell. Adjust it at the best point of the corrected convergence. Use a permalloy strip at each corner only when the convergence is out of the specs at the corner.

\* Permalloy Magnetic Strip Part Number (TSM10032-2).

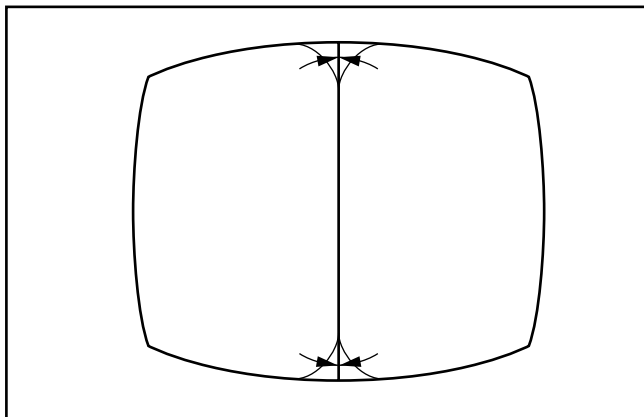


Fig. E10-1

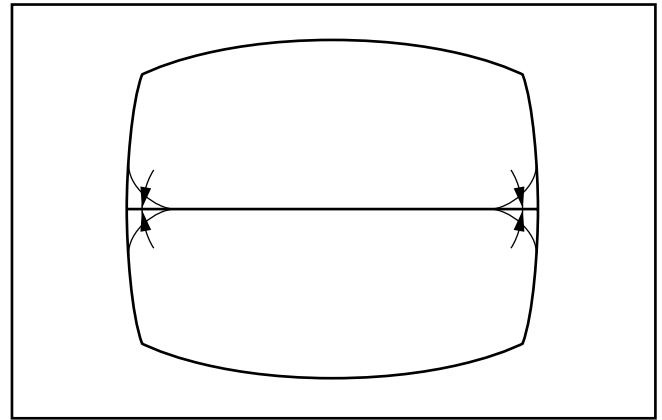


Fig. E10-2

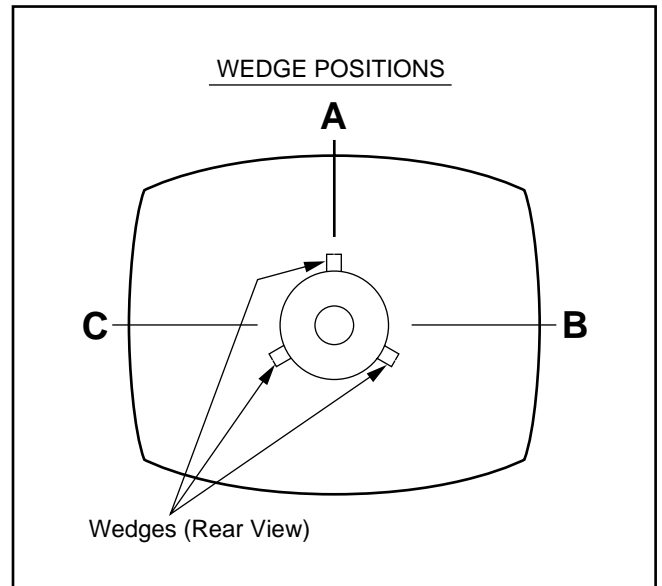


Fig. E10-3

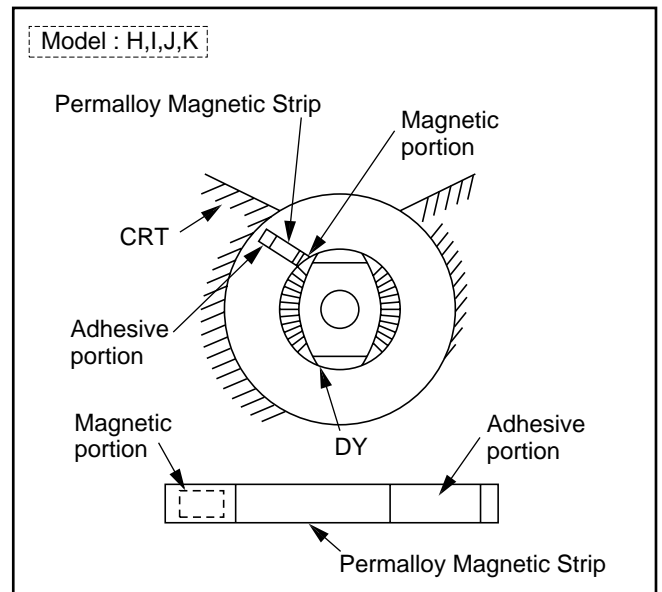


Fig. E10-4

## 7. V. HEIGHT/ H. POSITION ADJUSTMENT

Purpose :

To set the standard vertical and horizontal picture size.

Symptom of Misadjustment :

The picture size is on the vertical and horizontal axis is abnormal.

TP	ADJ.	MODE	INPUT
	R452 (V. HEIGHT) R532 (H. POSITION)	STOP	(VIDEO IN) MONOSCOPE PATTERN SIGNAL
TAPE	M.EQ.		SPEC.
	NTSC VIDEO PATTERN GENERATOR		Refer to Fig. E11-1 or Fig. E11-2

Note :

R452, R532 : TV Main C.B.A.

Model : A,B,C,D,E,F,G

1. Adjust R452 (V. HEIGHT) so that the top 3rd line is just in view as shown in Fig. E11-1.
2. Confirm that 10th dotted line is in view and 11th line is out of view.  
If not, readjust R452 (V. HEIGHT) so that the top 3rd line is within  $\pm 2\text{mm}$  from the top edge of the screen and confirm that 9th line is in view and 11th line is out of view.
3. Adjust R532 (H. POSITION) so that length A is equal to length B as shown in Fig. E11-1.

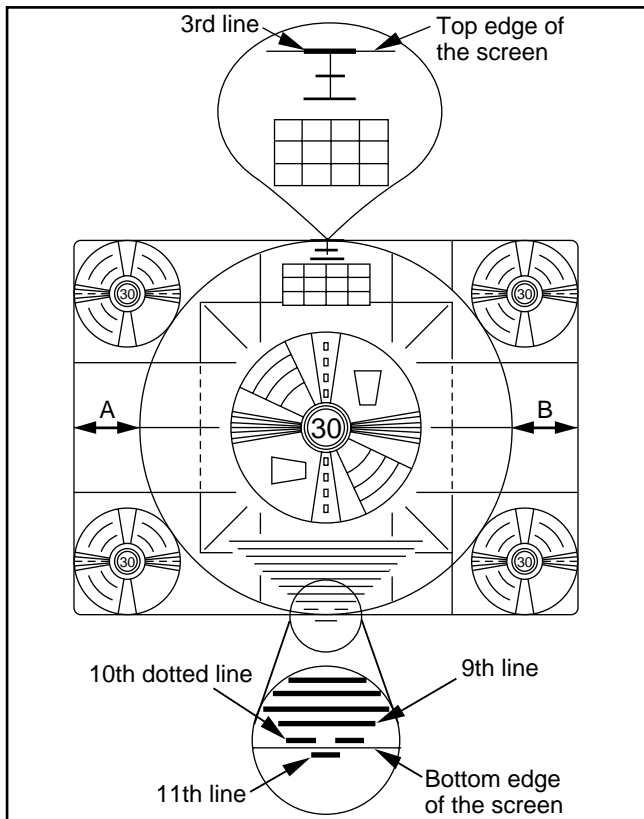


Fig. E11-1

Model : H,I,J,K,L

1. Adjust the R452 (V. HEIGHT) so that the top 4th line is just in view.
2. Confirm that the bottom 3rd line is in view and the bottom 4th line is out of view (Refer to Fig. E11-2).  
If not, readjust R452 (V. HEIGHT) so that 11th line is just in view.
3. Adjust R532 (H. POSITION) so that length A is equal to length B as shown in Fig. E11-2.

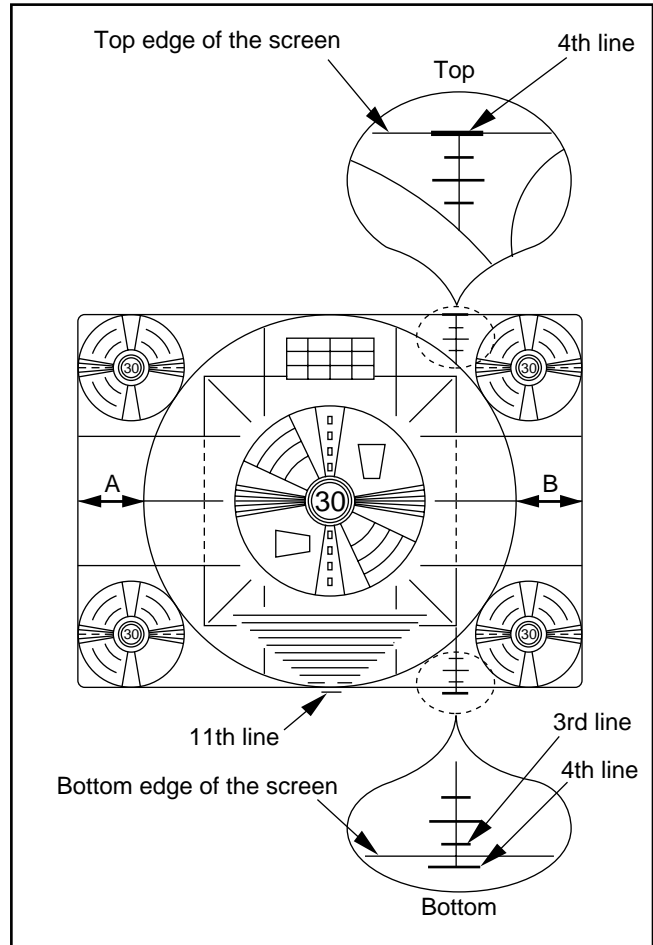


Fig. E11-2

## 8. WHITE BALANCE ADJUSTMENT

### Purpose:

To set the standard white level for each color temperature.

### Symptom of Misadjustment :

White becomes bluish or reddish.

TP	ADJ.	MODE	INPUT
	R363, R365, R369, R370, R371	STOP	(VIDEO IN) LUMINANCE PATTERN SIGNAL
TAPE	M.EQ.		SPEC.
	NTSC VIDEO PATTERN GENERATOR WHITE BALANCE METER		Refer to descriptions below

### Note :

R363, R365, R369, R370, R371 : CRT C.B.A.

### (SETUP)

- Set the following control levels using the remote control.  
Color : Min.  
Tint : Center  
Brightness : Center  
Picture : Max.  
Sharpness : Center

### Method 1

- Turn the Screen control on Flyback Transformer fully counterclockwise.
- Set the Service Switch on the TV Y/C Process Section of the VCR Main C.B.A. to Service Position.
- Turn the Screen Control on Flyback Transformer clockwise carefully and stop at the point where any color is first observed.
- Adjust (R369 (B-CUT OFF), R370 (G-CUT OFF) or R371 (R-CUT OFF)) VR of colors which are not observed in step 3 so that the Horizontal line is white.
- Set the Service Switch to the Normal Position.
- Place the photo sensor foot for "JUST FIT" to the CRT.
- Set the R5907 (SUB BRIGHTNESS) so that the White Balance Meter (High-Light White, G Meter) is  $80\mu\text{A}$  : Model A,B,C,D,E,F,G or  $40\mu\text{A}$  : Model : H,I,J,K,L.
- Adjust R365 (R-DRIVE) and R363 (B-DRIVE) so that the White Balance Meter (both R & B Meters) is  $0\mu\text{A}$ .
- Set the R5907 (SUB BRIGHTNESS) so that the White Balance Meter (Cut OFF White, G Meter) is  $50\mu\text{A}$ .
- Adjust R371 (R-CUT OFF) and R369 (B-CUT OFF) so that the White Balance Meter (both R & B Meter) is  $0\mu\text{A}$ .
- Repeat step 7 and 8 until both R and B read  $0\mu\text{A}$  in the High-Light and Low-Light Modes.

### Method 2 (Alternative to Method 1)

- Supply white pattern signal.
- Adjust R365 (R-DRIVE) and R363 (B-DRIVE) so that the whole screen is white.
- Turn R5907 (SUB BRIGHTNESS) fully counterclockwise for minimum level.
- Adjust (R369 (B-CUT OFF), R370 (G-CUT OFF) or R371 (R-CUT OFF)) VR of colors which are not observed so that the whole screen is white.
- Turn R5907 (SUB BRIGHTNESS) and confirm that the screen is tracking the white pattern properly. Repeat the above steps 2 to 4 until the screen is properly tracking the white pattern.

## 9. SUB BRIGHTNESS ADJUSTMENT

### Purpose :

To set the optimum brightness level.

### Symptom of Misadjustment :

The picture is too white or too black.

### (SETUP)

- Perform this adjustment in a darkened room.
- Reset the control levels to the factory -set levels using the remote control.

TP	ADJ.	MODE	INPUT
	R5907	STOP	
TAPE	M.EQ.		SPEC.
			Refer to descriptions below

### Note :

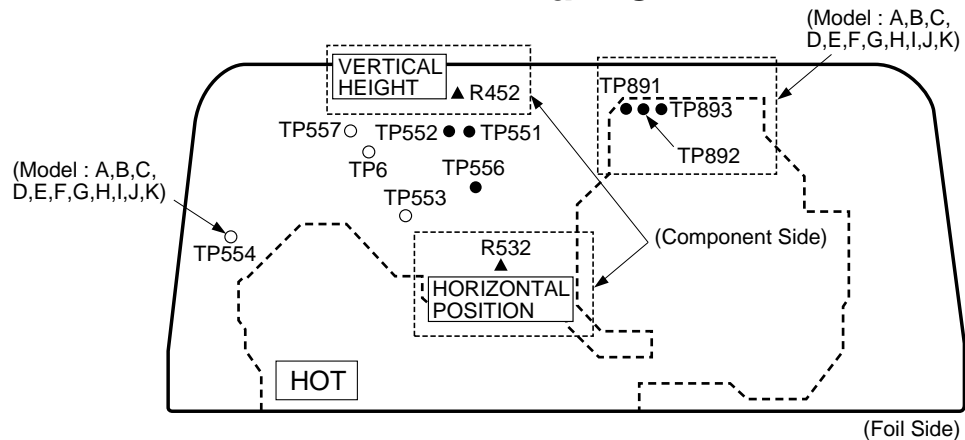
R5907 : TV Y/C Process Section on the VCR Main C.B.A.

- Do not input any signal to the unit.
- Set input select item to Line in OSD to display black screen.
- Adjust R5907 (SUB BRIGHTNESS) so that the black screen starts to turn grey (lighting only).

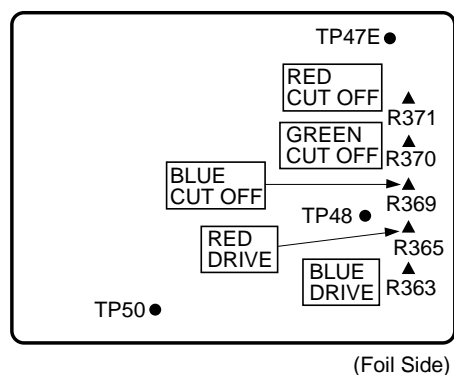


# D. LOCATION OF TEST POINTS AND ADJUSTMENT POINTS

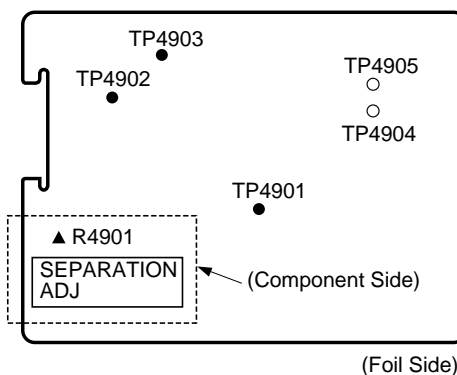
## TV Main C.B.A.



## CRT C.B.A.



## TV Stereo Amp C.B.A. (Model : K)



## TV Stereo C.B.A. (Model : L)




### Test Point Information

- Test Point with a jumper wire across a hole in the P.C.B.
- Test Point with a Test Pin.
- Test Point with no Test Pin.
- Test Point with a component lead.

# III. SCHEMATIC DIAGRAMS

## SCHEMATIC AND C.B.A. DIAGRAM NOTES





### Important safety notice

Components identified by the sign  have special characteristics important for safety. When replacing any of these components, use only the specified parts.

### Replacement parts

- Do not use the part number shown on this drawing for ordering. The correct part number is shown in the parts list, and may be slightly different or amended since this drawing was prepared.
- To maintain original function and reliability of repaired units, use only original replacement parts which are listed with their part numbers in the parts list section of the service manual.
- Parts different in shape or size may be used. However, only interchangeable parts will be supplied as service replacement parts.

### Test point information

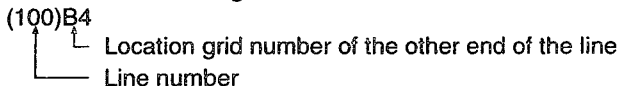
-  : Test point with a jumper wire across a hole in P.C.B.
-  : Test point with a component lead on the foil side.
-  : Test point with no test pin.
-  : Test point with a test pin.

### How to read Schematic and C.B.A. Diagrams

- The Mark "■" indicates leaded component.

Example: ■ R1002

- How to read converged lines



- Voltage Measurement

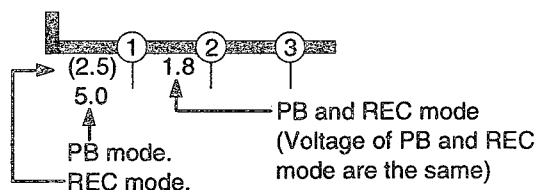
- Voltage Chart

- Color bar signal in SP mode.
- - -: Unmeasurable or not necessary to measure.

- Schematic Diagram

- Audio Section  
Monoscope signal in SP REC and PB mode.
- Other Sections  
Color bar signal in SP REC and PB mode.

Note: Voltage Indications for the REC and PB modes on the Schematic are as shown below.



- Indication for Zener Voltage of Zener Diodes

The Zener Voltage of Zener Diodes are indicated as such on Schematic Diagrams.

Example:  
(6.2V).....Zener Voltage

- How to identify Connectors on Schematic Diagrams

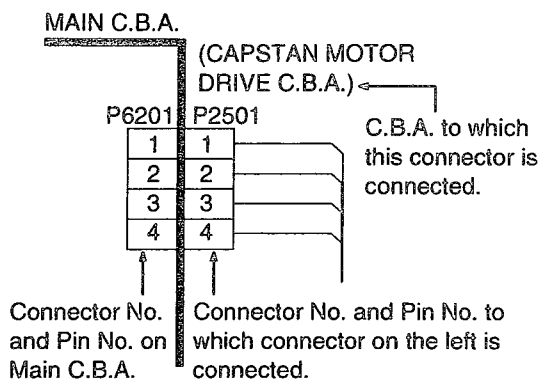
Each connector is labeled with a Connector No. and Pin No. Indicating what it is connected to, in other words, its counterpart.

Connections between large P.C.B.s and small circuit boards are illustrated on the large P.C.B. Schematics.

Use the interconnection schematic diagram to find the connection between associated connectors.

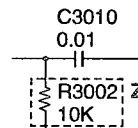
Example:

The connections between C.B.A.s are as shown below.



- Parts enclosed in dashed lines marked "Z" are not used in any models included in this service manual.

Example:



- Reference No. on C.B.A. is abbreviated as follows.

Power Supply	1000 series	Hi-Fi Audio	4200 series
Capstan	2500 series	Hi-Fi Head Amp	4400 series
Cylinder		System Control	6000 series
Motor Drive	2600 series	Servo	6200 series
Video	3000 series	Operation	6300 series
Head Amp	3500 series	Demodulator	7000 series
Audio	4000 series	S-VHS	8000 series

Example:

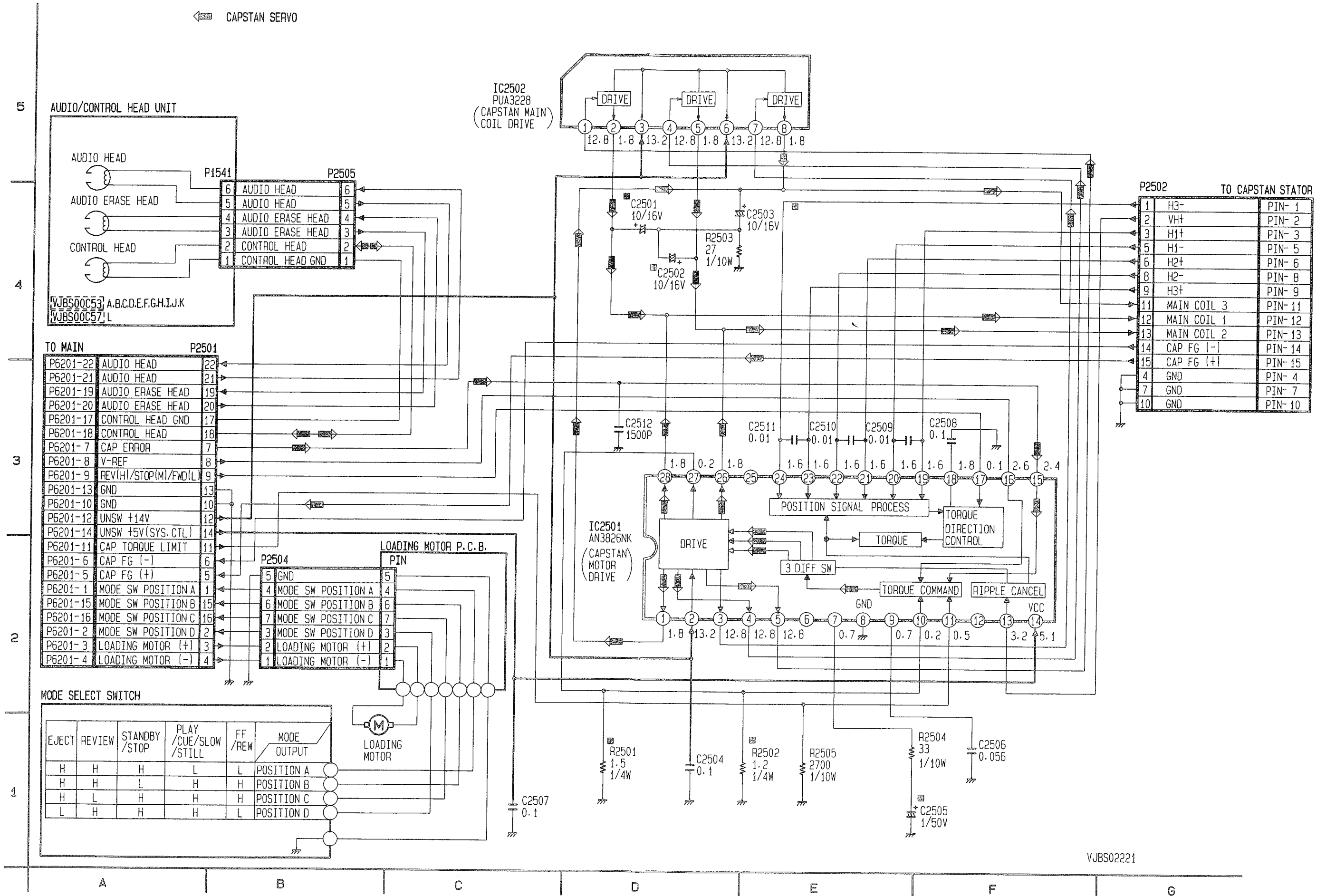
Section	Reference No.	
	Schematic	C.B.A.
Power Supply	R1002	R2
Capstan	R2502	R2
Cylinder		
Motor Drive	R2602	R2

Comparison chart of models & marks used in Schematic and C.B.A. Diagrams

MODEL	MARK	MODEL	MARK
PV-M1326	A	PV-M2036	H
PV-M1326W	B	VV2006	I
VV1306	C	VV2016W	J
VV1306B	D	PV-M2046	K
VV1316W	E	VV2706	L
PV-M1346	F	Not used in any models	Z
PV-M1356W	G		

Note: Refer to item 7 for mark "Z".

# CAPSTAN MOTOR DRIVE SCHEMATIC DIAGRAM



VJBS02221

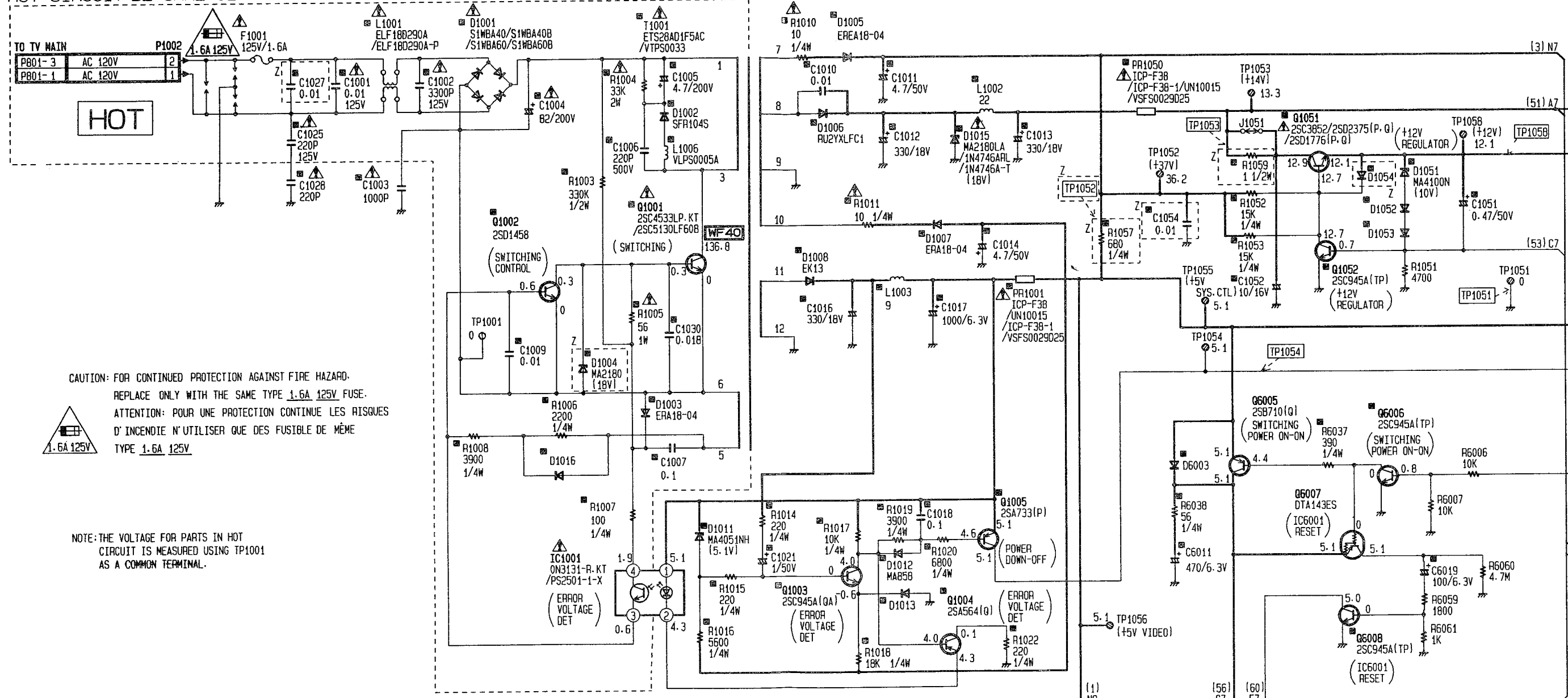
# MAIN I (POWER SUPPLY/SYSTEM CONTROL/SERVO) SCHEMATIC DIAGRAM (A, B, C, D, E, F, G,

← CAPSTAN SERVO

↔ CYLINDER SERVO

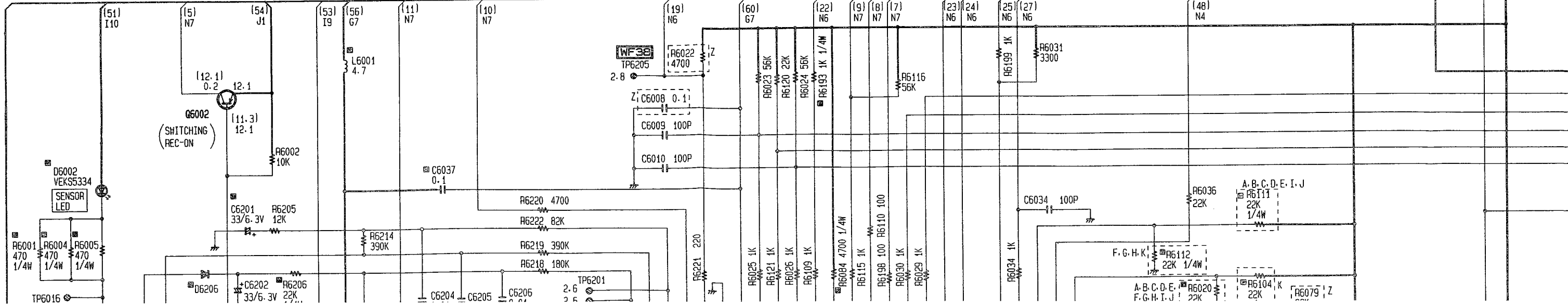
HOT CIRCUIT. BE CAREFUL AND USE AN ISOLATION TRANSFORMER WHEN SERVICING.

30  
9  
8  
7  
6



CAUTION: FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH THE SAME TYPE 1.6A 125V FUSE.  
ATTENTION: POUR UNE PROTECTION CONTINUE LES RISQUES D'INCENDIE N'UTILISER QUE DES FUSIBLE DE MEME TYPE 1.6A 125V

NOTE: THE VOLTAGE FOR PARTS IN HOT CIRCUIT IS MEASURED USING TP1001 AS A COMMON TERMINAL.



(A, B, C, D, E, F, G, H, I, J, K)

IMPORTANT SAFETY NOTICE:  
COMPONENTS IDENTIFIED BY THE SIGN  $\Delta$  HAVE  
SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY.  
WHEN REPLACING ANY OF THESE COMPONENTS,  
USE ONLY THE SPECIFIED PARTS.

NOTE:  
FOR SCHEMATIC AND C.B.A. DIAGRAM NOTES,  
REFER TO BEGINNING OF SCHEMATIC SECTION (SECTION III).

**SERVICE CAUTION**  
**SERVICE PROCEDURE**  
**FOR POWER SUPPLY**

- CHECK VOLTAGE AT LISTED TEST PINS.  
IF OK, CHECK OTHER CIRCUIT.
- PERFORM SHORT CHECK AT LISTED TEST PINS TO  
CONFIRM WHICH POWER LINE HAS SHORT CIRCUIT.
- CHECK THE CIRCUIT AND REPAIR.  
REFER TO POWER SUPPLY CHECKING PROCEDURE IN  
BLOCK DIAGRAMS.

TEST POINTS (VCR MAIN C.B.A.)	VOLTAGE	RESISTANCE
TP1052 (DC+37V)	36.4V	MORE THAN 500 $\Omega$
TP1053 (DC+14V)	13.4V	MORE THAN 30 $\Omega$
TP1054 (POWER DOWN (L))	5.2V	MORE THAN 500 $\Omega$
TP1055 (DC+5V SYS. CTL)	5.2V	MORE THAN 25 $\Omega$
TP1056 (DC+5V VIDEO)	5.2V	MORE THAN 25 $\Omega$
TP1058 (DC+12V)	12.0V	MORE THAN 30 $\Omega$

VOLTAGE : STOP MODE UNDER NORMAL CONDITIONS.  
RESISTANCE : POWER OFF UNDER NORMAL CONDITIONS.  
NOTE : THE VOLTAGES AND RESISTANCE LISTED ARE APPROXIMATE.

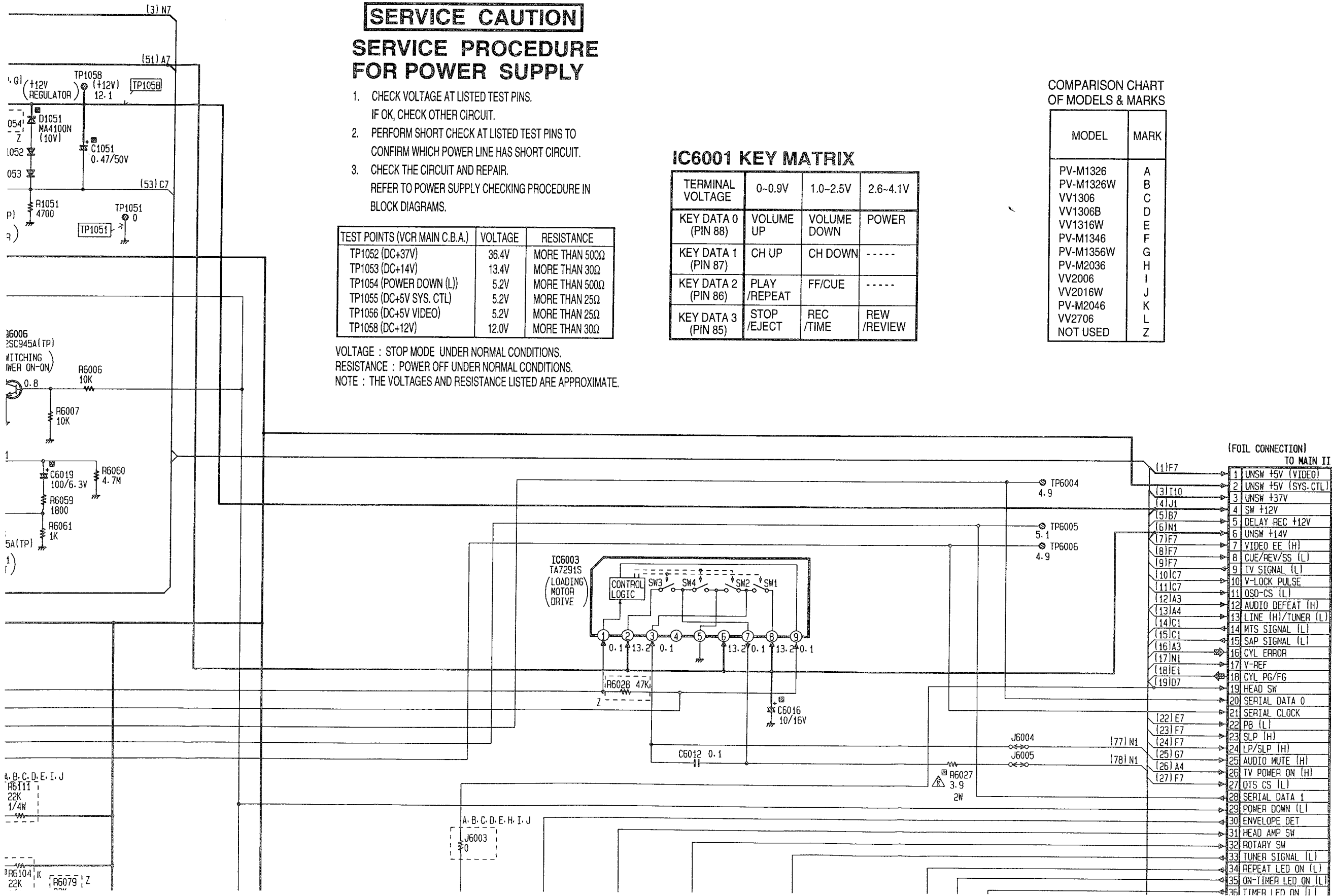
**IC6001 KEY MATRIX**

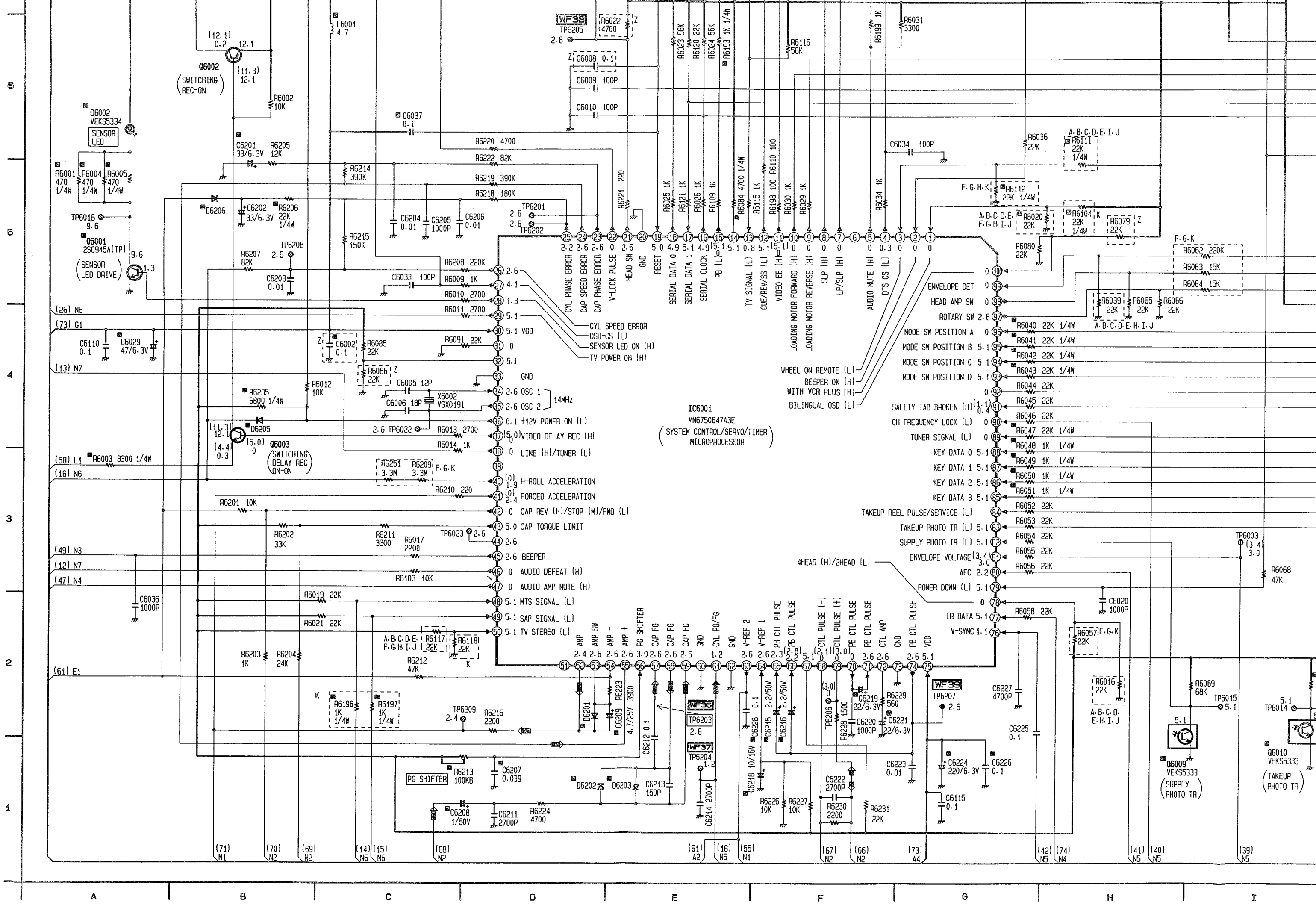
TERMINAL VOLTAGE	0-0.9V	1.0-2.5V	2.6-4.1V
KEY DATA 0 (PIN 88)	VOLUME UP	VOLUME DOWN	POWER
KEY DATA 1 (PIN 87)	CH UP	CH DOWN	-----
KEY DATA 2 (PIN 86)	PLAY /REPEAT	FF/CUE	-----
KEY DATA 3 (PIN 85)	STOP /EJECT	REC /TIME	REW /REVIEW

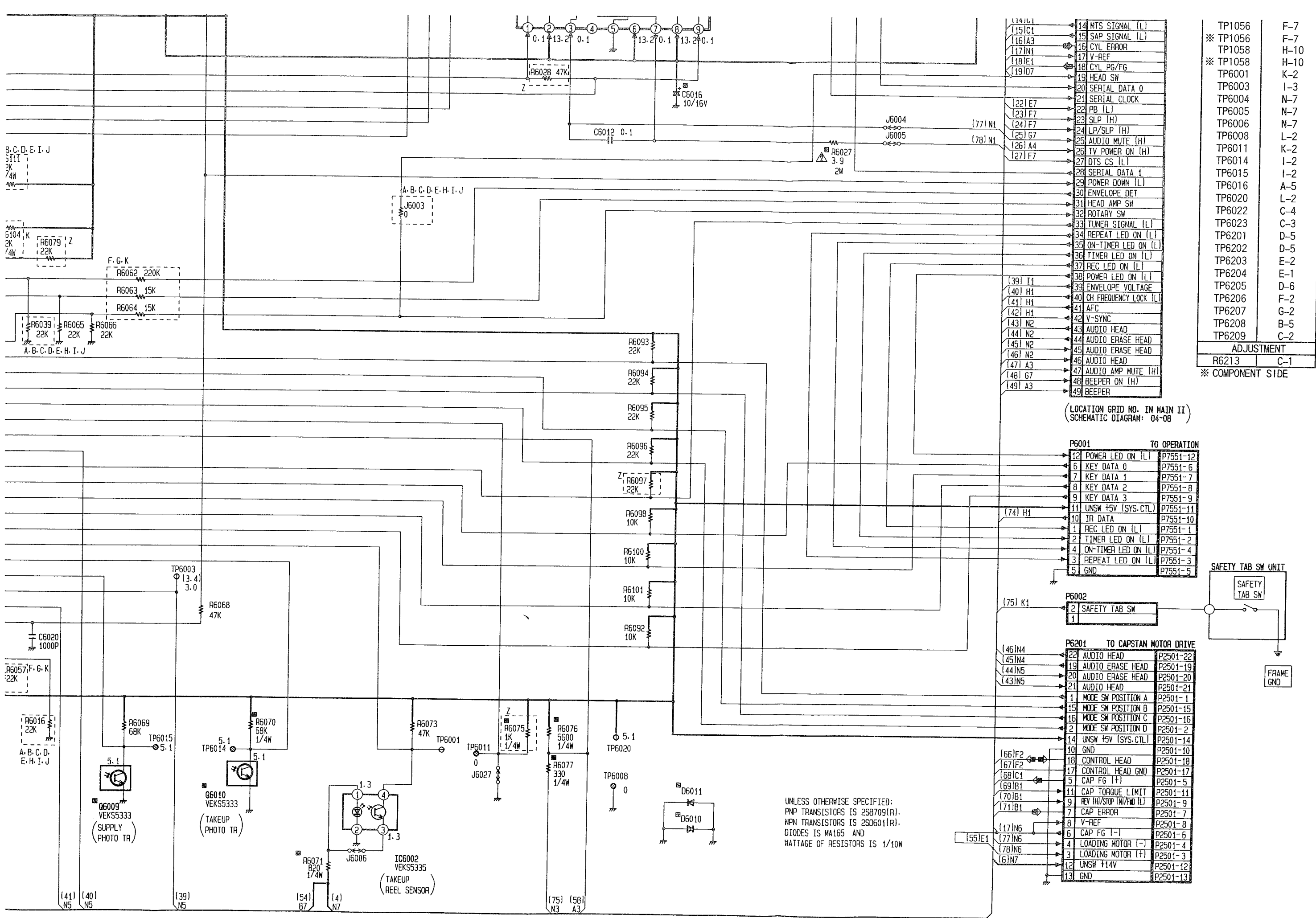
**COMPARISON CHART**  
**OF MODELS & MARKS**

MODEL	MARK
PV-M1326	A
PV-M1326W	B
VV1306	C
VV1306B	D
VV1316W	E
PV-M1346	F
PV-M1356W	G
PV-M2036	H
VV2006	I
VV2016W	J
PV-M2046	K
VV2706	L
NOT USED	Z

MAIN I	
TRANSISTOR	
Q1001	D-9
Q1002	C-9
Q1003	E-7
Q1004	E-7
Q1005	F-8
Q1051	G-10
Q1052	G-9
Q6001	A-5
Q6002	B-6
Q6003	B-4
Q6005	G-8
Q6006	H-8
Q6007	G-8
Q6008	H-7
Q6009	H-1
Q6010	I-1
IC	
IC1001	C-8
IC6001	E-4
IC6002	J-1
IC6003	K-7
CONNECTOR	
P1002	A-10
P6001	O-4
P6002	O-3
P6201	O-2
TEST POINT	
TP1001	C-9
TP1051	H-9
* TP1051	H-9
TP1052	G-10
* TP1052	F-9
TP1053	G-10
* TP1053	G-10
TP1054	G-9
* TP1054	G-9
TP1055	G-9
* TP1055	G-9
TP1056	F-7
* TP1056	F-7
TP1058	H-10
* TP1058	H-10
TP6001	K-2
TP6003	I-3
TP6004	N-7
TP6005	N-7
TP6006	N-7
TP6008	L-2
TP6011	K-2
TP6014	I-2
TP6015	I-2
TP6016	A-5
TP6020	L-2
TP6022	C-4
TP6023	C-3
TP6201	D-5
TP6202	D-5
TP6203	F-2







(14) L1	14	MTS SIGNAL (L)
(15) C1	15	SAP SIGNAL (L)
(16) A3	16	CYL ERROR
(17) N1	17	V-REF
(18) E1	18	CYL PG/FG
(19) D7	19	HEAD SW
(20) E7	20	SERIAL DATA 0
(23) F7	21	SERIAL CLOCK
(24) F7	22	PB (L)
(25) G7	23	SLP (H)
(26) A4	24	LP/SLP (H)
(27) F7	25	AUDIO MUTE (H)
(39) I1	26	TV POWER ON (H)
(40) H1	27	DTS CS (L)
(41) H1	28	SERIAL DATA 1
(42) H1	29	POWER DOWN (L)
(43) N2	30	ENVELOPE DET
(44) N2	31	HEAD AMP SW
(45) N2	32	ROTARY SW
(46) N2	33	TUNER SIGNAL (L)
(47) A3	34	REPEAT LED ON (L)
(48) G7	35	ON-TIMER LED ON (L)
(49) A3	36	TIMER LED ON (L)
	37	REC LED ON (L)
	38	POWER LED ON (L)
	39	ENVELOPE VOLTAGE
	40	CH FREQUENCY LOCK (L)
	41	AFC
	42	V-SYNC
	43	AUDIO HEAD
	44	AUDIO ERASE HEAD
	45	AUDIO ERASE HEAD
	46	AUDIO HEAD
	47	AUDIO AMP MUTE (H)
	48	BEEPER ON (H)
	49	BEEPER

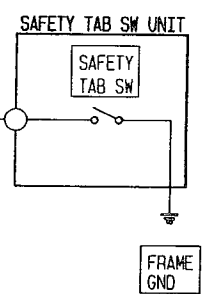
TP1056	F-7
※ TP1056	F-7
TP1058	H-10
※ TP1058	H-10
TP6001	K-2
TP6003	I-3
TP6004	N-7
TP6005	N-7
TP6006	N-7
TP6008	L-2
TP6011	K-2
TP6014	I-2
TP6015	I-2
TP6016	A-5
TP6020	L-2
TP6022	C-4
TP6023	C-3
TP6201	D-5
TP6202	D-5
TP6203	E-2
TP6204	E-1
TP6205	D-6
TP6206	F-2
TP6207	G-2
TP6208	B-5
TP6209	C-2
ADJUSTMENT	
R6213	C-1
※ COMPONENT SIDE	

(LOCATION GRID NO. IN MAIN II)  
SCHEMATIC DIAGRAM: 04-08

P6001 TO OPERATION	
12	POWER LED ON (L)
6	KEY DATA 0
7	KEY DATA 1
8	KEY DATA 2
9	KEY DATA 3
11	UNSW +5V (SYS-CTL)
10	IR DATA
1	REC LED ON (L)
2	TIMER LED ON (L)
4	ON-TIMER LED ON (L)
3	REPEAT LED ON (L)
5	GND

P6002 SAFETY TAB SW	
2	SAFETY TAB SW
1	

P6201 TO CAPSTAN MOTOR DRIVE	
22	AUDIO HEAD
19	AUDIO ERASE HEAD
20	AUDIO ERASE HEAD
21	AUDIO HEAD
1	MODE SW POSITION A
15	MODE SW POSITION B
16	MODE SW POSITION C
2	MODE SW POSITION D
14	UNSW +5V (SYS-CTL)
10	GND
18	CONTROL HEAD
17	CONTROL HEAD GND
5	CAP FG (+)
11	CAP TORQUE LIMIT
9	REV (H)/STOP (H)/FWD (L)
7	CAP ERROR
8	V-REF
6	CAP FG (-)
4	LOADING MOTOR (-)
3	LOADING MOTOR (+)
12	UNSW +14V
13	GND



UNLESS OTHERWISE SPECIFIED:  
PNP TRANSISTORS IS 2SB709(R).  
NPN TRANSISTORS IS 2SD601(R).  
DIODES IS MA165 AND  
WATTAGE OF RESISTORS IS 1/10W

VJBS3031

# MAIN I (SYSTEM CONTROL/SERVO/VCR PLUS) / POWER SUPPLY SCHEMATIC DIAGRAM (L

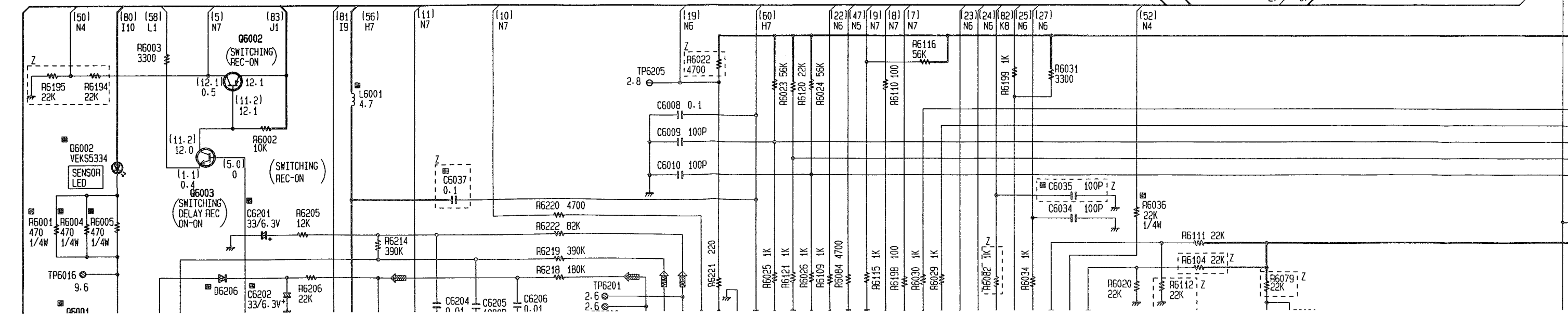
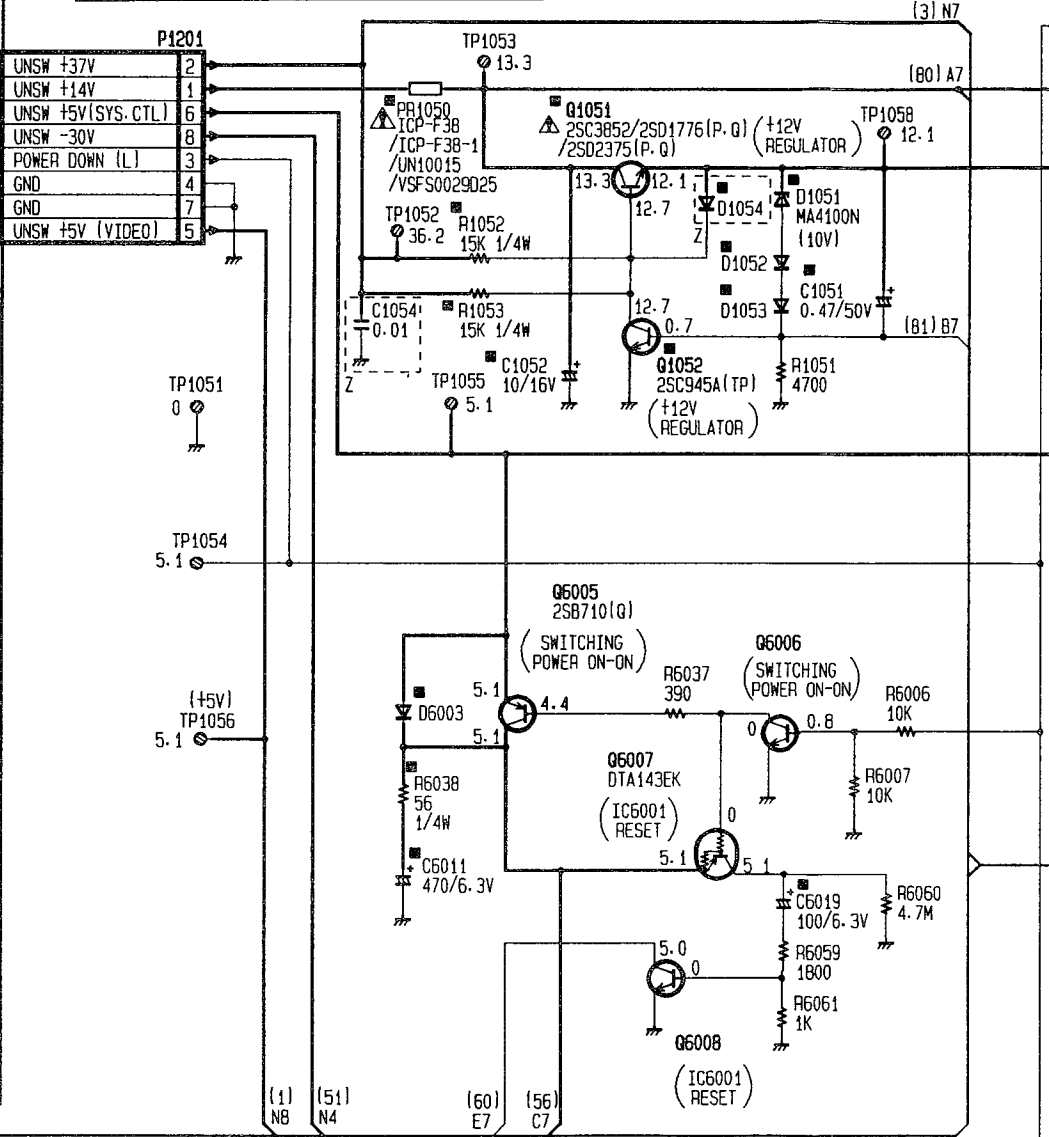
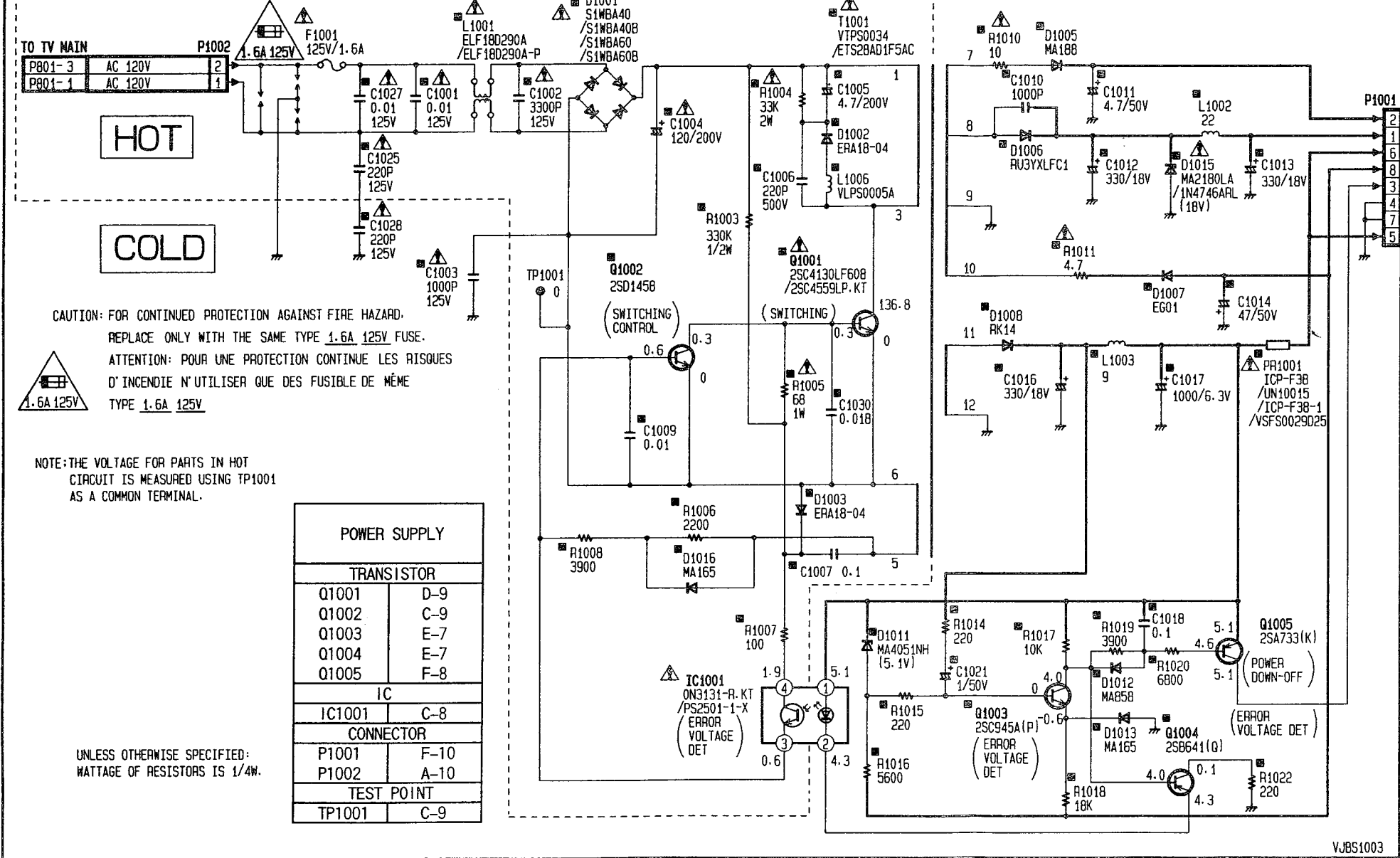
## IC6001 KEY MATRIX

TERMINAL VOLTAGE	0-0.9V	1.0-2.5V	2.6-4.1V
KEY DATA 0 (PIN 88)	VOLUME UP	VOLUME DOWN	POWER
KEY DATA 1 (PIN 87)	CH UP	CH DOWN	-----
KEY DATA 2 (PIN 86)	PLAY /REPEAT	FF/CUE	-----
KEY DATA 3 (PIN 85)	STOP /EJECT	REC /TIME	REW /REVIEW

NOTE:  
FOR SCHEMATIC AND C.B.A. DIAGRAM  
REFER TO BEGINNING OF SCHEMATIC

### POWER SUPPLY C.B.A.

HOT CIRCUIT. BE CAREFUL AND USE AN ISOLATION TRANSFORMER WHEN SERVICING.



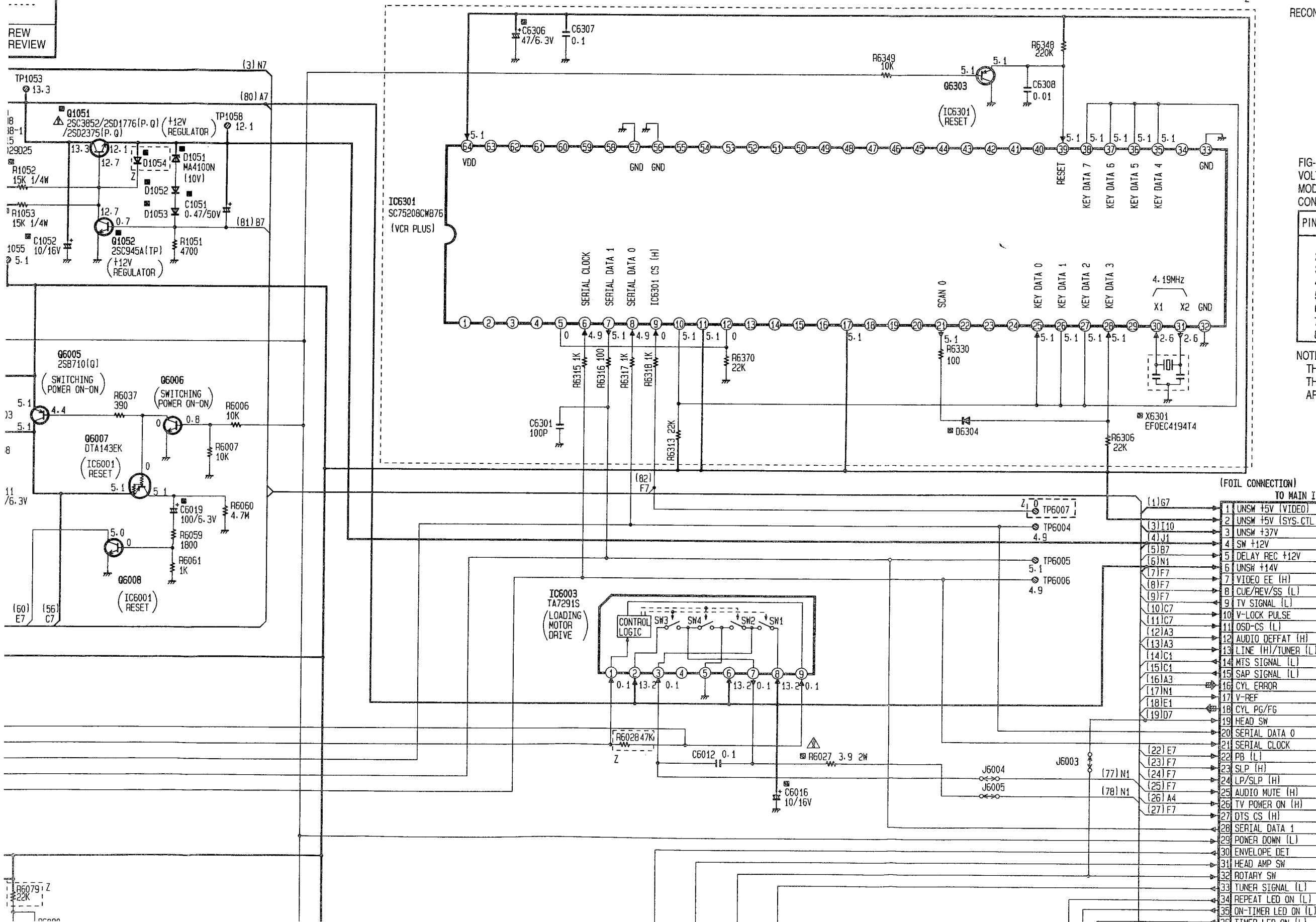


# ATIC DIAGRAM (L)

2.6-4.1V  
POWER  
REVIEW

NOTE:  
FOR SCHEMATIC AND C.B.A. DIAGRAM NOTES,  
REFER TO BEGINNING OF SCHEMATIC SECTION (SECTION III).

IMPORTANT SAFETY NOTICE:  
COMPONENTS IDENTIFIED BY THE SIGN  $\Delta$  HAVE  
SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY.  
WHEN REPLACING ANY OF THESE COMPONENTS,  
USE ONLY THE SPECIFIED PARTS.



## SERVICE CAUTION

### SERVICE PROCEDURE FOR POWER SUPPLY C.B.A

- CHECK VOLTAGE AT PINS OF P1201 ON THE MAIN C.B.A. (SEE FIG-1)
- DISCONNECT AC PLUG AND REMOVE THE FLAT CABLE FROM P1201.
- SHORT CHECK AT TERMINAL OF P1201 ON THE MAIN C.B.A. (SEE FIG-2)
- REPAIR THE MAIN C.B.A.
- REMOVE THE SHIELD CASE FROM THE POWER SUPPLY C.B.A. AND RECONNECT THE FLAT CABLE WITH P1201 FOR REPAIR.

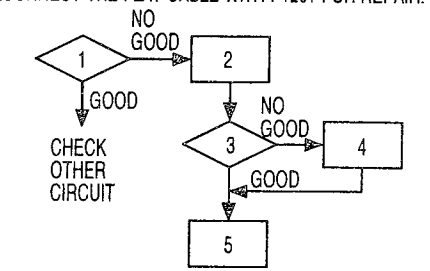


FIG-1  
VOLTAGES IN STOP  
MODE UNDER NORMAL  
CONDITIONS

PIN NO.	VOLTAGE
1	13.5V
2	36.5V
3	5.2V
4	0V
5	5.2V
6	5.2V
7	0V
8	-30.7V

NOTE:  
THE VOLTAGES OF  
THIS TABLE ARE  
APPROX.

FIG-2  
RESISTANCE UNDER  
NORMAL CONDITIONS.

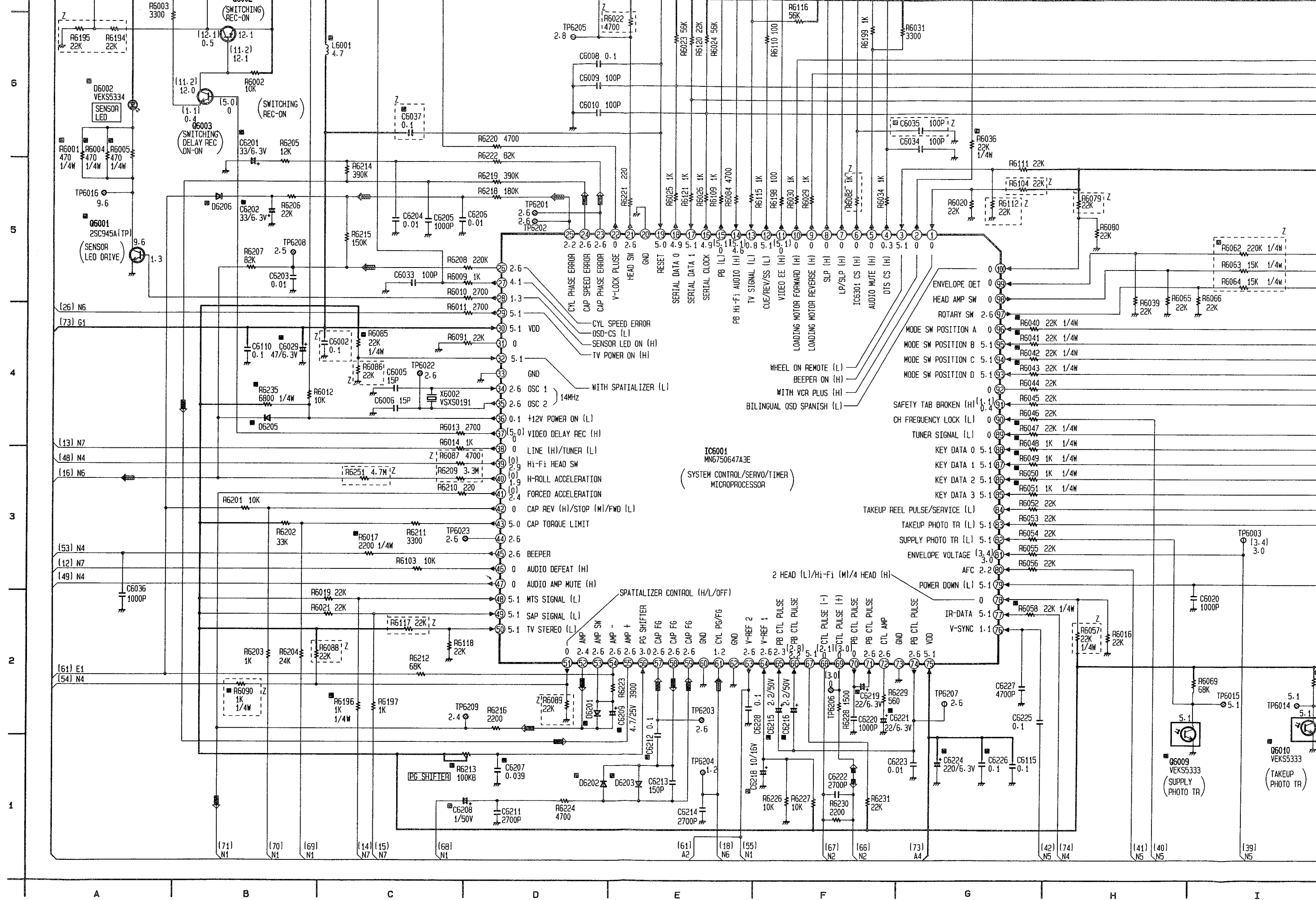
PIN NO.	RESISTANCE
1	MORE THAN 30Ω
2	MORE THAN 500Ω
3	MORE THAN 500Ω
4	-----
5	MORE THAN 25Ω
6	MORE THAN 25Ω
7	-----
8	MORE THAN 5KΩ

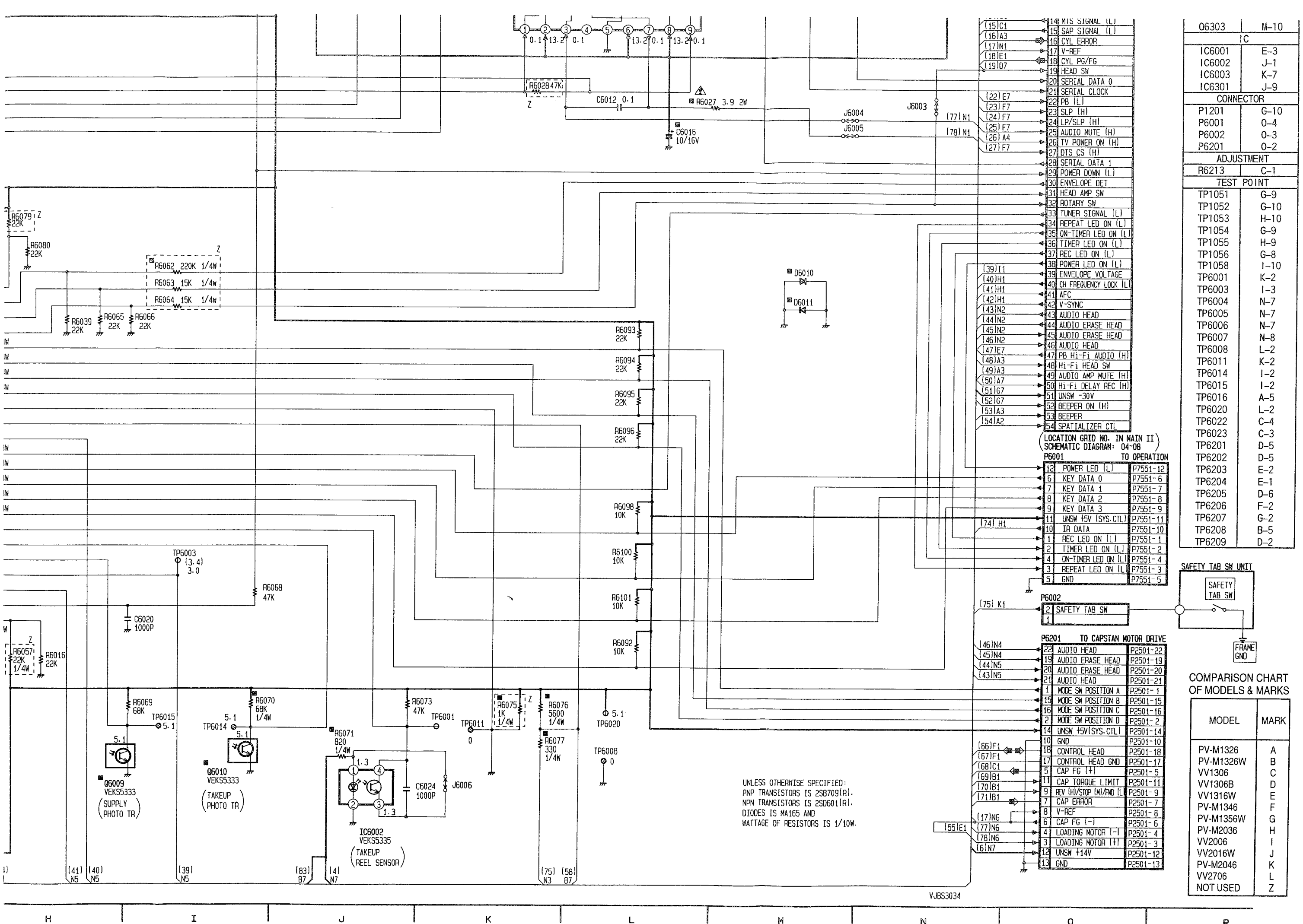
NOTE:  
1. PIN 4 OF THE TERMI-  
NALS  
SHOULD BE GROUND IN  
THIS MEASUREMENT.  
2. RESISTANCES IN THIS  
TABLE ARE APPROX.

MAIN I	
TRANSISTOR	
Q1051	H-10
Q1052	H-9
Q6001	A-5
Q6002	B-7
Q6003	B-6
Q6005	H-8
Q6006	I-8
Q6007	H-8
Q6008	H-7
Q6009	H-1
Q6010	I-1
Q6303	M-10
IC	
IC6001	E-3
IC6002	J-1
IC6003	K-7
IC6301	J-9
CONNECTOR	
P1201	G-10
P6001	O-4
P6002	O-3
P6201	O-2
ADJUSTMENT	
R6213	C-1
TEST POINT	
TP1051	G-9
TP1052	G-10
TP1053	H-10
TP1054	G-9
TP1055	H-9

(FOIL CONNECTION)  
TO MAIN II

(1)G7	1 UNSW +5V (VIDEO)
(3)I10	2 UNSW +5V (SYS.CTL)
(4)J1	3 UNSW +37V
(5)B7	4 SW +12V
(6)N1	5 DELAY REC +12V
(7)F7	6 UNSW +14V
(8)F7	7 VIDEO EE (H)
(9)F7	8 CUE/REV/SS (L)
(10)C7	9 TV SIGNAL (L)
(11)C7	10 V-LOCK PULSE
(12)A3	11 OSD-CS (L)
(13)A3	12 AUDIO DEFFAT (H)
(14)C1	13 LINE (H)/TUNER (L)
(15)C1	14 MTS SIGNAL (L)
(16)A3	15 SAP SIGNAL (L)
(17)N1	16 CYL ERROR
(18)E1	17 V-REF
(19)D7	18 CYL PG/FG
(22)E7	19 HEAD SW
(23)F7	20 SERIAL DATA 0
(24)F7	21 SERIAL CLOCK
(25)F7	22 PB (L)
(26)A4	23 SLP (H)
(27)F7	24 LP/SLP (H)
(77)N1	25 AUDIO MUTE (H)
(78)N1	26 TV POWER ON (H)
	27 DTS CS (H)
	28 SERIAL DATA 1
	29 POWER DOWN (L)
	30 ENVELOPE DET
	31 HEAD AMP SW
	32 ROTARY SW
	33 TUNER SIGNAL (L)
	34 REPEAT LED ON (L)
	35 ON-TIMER LED ON (L)
	36 TIMER LED ON (L)



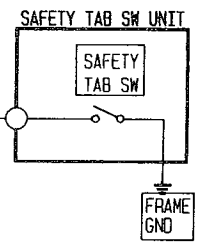


(15)IC1	14 MIS SIGNAL (L)
(16)A3	15 SAP SIGNAL (L)
(17)N1	16 CYL ERROR
(18)E1	17 V-REF
(19)D7	18 CYL PG/FG
	19 HEAD SW
	20 SERIAL DATA 0
	21 SERIAL CLOCK
(22)E7	22 PB (L)
(23)F7	23 SLP (H)
(24)F7	24 LP/SLP (H)
(25)F7	25 AUDIO MUTE (H)
(26)A4	26 TV POWER ON (H)
(27)F7	27 DTS CS (H)
	28 SERIAL DATA 1
	29 POWER DOWN (L)
	30 ENVELOPE DET
	31 HEAD AMP SW
	32 ROTARY SW
	33 TUNER SIGNAL (L)
	34 REPEAT LED ON (L)
	35 ON-TIMER LED ON (L)
	36 TIMER LED ON (L)
	37 REC LED ON (L)
	38 POWER LED ON (L)
(39)I1	39 ENVELOPE VOLTAGE
(40)H1	40 CH FREQUENCY LOCK (L)
(41)H1	41 AFC
(42)H1	42 V-SYNC
(43)N2	43 AUDIO HEAD
(44)N2	44 AUDIO ERASE HEAD
(45)N2	45 AUDIO ERASE HEAD
(46)N2	46 AUDIO HEAD
(47)E7	47 PB Hi-Fi AUDIO (H)
(48)A3	48 Hi-Fi HEAD SW
(49)A3	49 AUDIO AMP MUTE (H)
(50)A7	50 Hi-Fi DELAY REC (H)
(51)G7	51 UNSW -30V
(52)G7	52 BEEPER ON (H)
(53)A3	53 BEEPER
(54)A2	54 SPATIALIZER CTL

Q6303	M-10
IC	
IC6001	E-3
IC6002	J-1
IC6003	K-7
IC6301	J-9
CONNECTOR	
P1201	G-10
P6001	O-4
P6002	O-3
P6201	O-2
ADJUSTMENT	
R6213	C-1
TEST POINT	
TP1051	G-9
TP1052	G-10
TP1053	H-10
TP1054	G-9
TP1055	H-9
TP1056	G-8
TP1058	I-10
TP6001	K-2
TP6003	I-3
TP6004	N-7
TP6005	N-7
TP6006	N-7
TP6007	N-8
TP6008	L-2
TP6011	K-2
TP6014	I-2
TP6015	I-2
TP6016	A-5
TP6020	L-2
TP6022	C-4
TP6023	C-3
TP6201	D-5
TP6202	D-5
TP6203	E-2
TP6204	E-1
TP6205	D-6
TP6206	F-2
TP6207	G-2
TP6208	B-5
TP6209	D-2

(LOCATION GRID NO. IN MAIN II)  
SCHEMATIC DIAGRAM: 04-08

P6001 TO OPERATION	
12	POWER LED (L)
6	KEY DATA 0
7	KEY DATA 1
8	KEY DATA 2
9	KEY DATA 3
11	UNSW +5V (SYS.CTL)
10	IR DATA
1	REC LED ON (L)
2	TIMER LED ON (L)
4	ON-TIMER LED ON (L)
3	REPEAT LED ON (L)
5	GND
P7551-12	
P7551-6	
P7551-7	
P7551-8	
P7551-9	
P7551-11	
P7551-10	
P7551-1	
P7551-2	
P7551-4	
P7551-3	
P7551-5	



P6002	
2	SAFETY TAB SW
1	
P6201 TO CAPSTAN MOTOR DRIVE	
(46)N4	22 AUDIO HEAD
(45)N4	19 AUDIO ERASE HEAD
(44)N5	20 AUDIO ERASE HEAD
(43)N5	21 AUDIO HEAD
1	MODE SW POSITION A
15	MODE SW POSITION B
16	MODE SW POSITION C
2	MODE SW POSITION D
14	UNSW +5V(SYS.CTL)
10	GND
(66)F1	18 CONTROL HEAD
(67)F1	17 CONTROL HEAD GND
(68)C1	5 CAP FG (+)
(69)B1	11 CAP TORQUE LIMIT
(70)B1	9 REV (H)/STOP (M)/FWD (L)
(71)B1	7 CAP ERROR
8	V-REF
6	CAP FG (-)
4	LOADING MOTOR (-)
3	LOADING MOTOR (+)
12	UNSW +14V
13	GND
P2501-22	
P2501-19	
P2501-20	
P2501-21	
P2501-1	
P2501-15	
P2501-16	
P2501-2	
P2501-14	
P2501-10	
P2501-18	
P2501-17	
P2501-5	
P2501-11	
P2501-9	
P2501-7	
P2501-8	
P2501-6	
P2501-4	
P2501-3	
P2501-12	
P2501-13	

COMPARISON CHART OF MODELS & MARKS

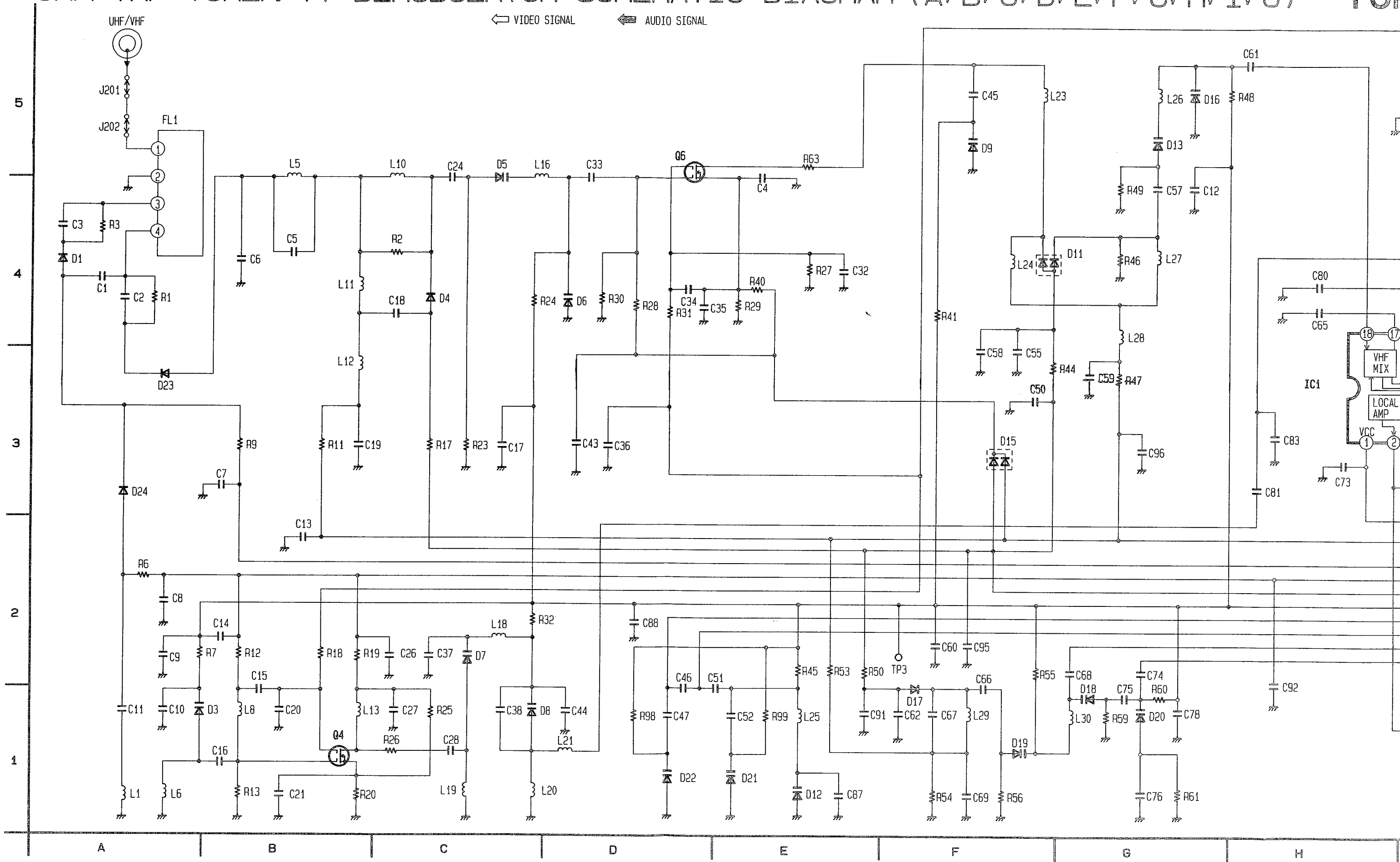
MODEL	MARK
PV-M1326	A
PV-M1326W	B
VV1306	C
VV1306B	D
VV1316W	E
PV-M1346	F
PV-M1356W	G
PV-M2036	H
VV2006	I
VV2016W	J
PV-M2046	K
VV2706	L
NOT USED	Z

UNLESS OTHERWISE SPECIFIED:  
PNP TRANSISTORS IS 2SB709(R).  
NPN TRANSISTORS IS 2SD601(R).  
DIODES IS MA165 AND  
WATTAGE OF RESISTORS IS 1/10W.

# UHF/VHF TUNER/TV DEMODULATOR SCHEMATIC DIAGRAM (A, B, C, D, E, F, G, H, I, J)

"FOF"

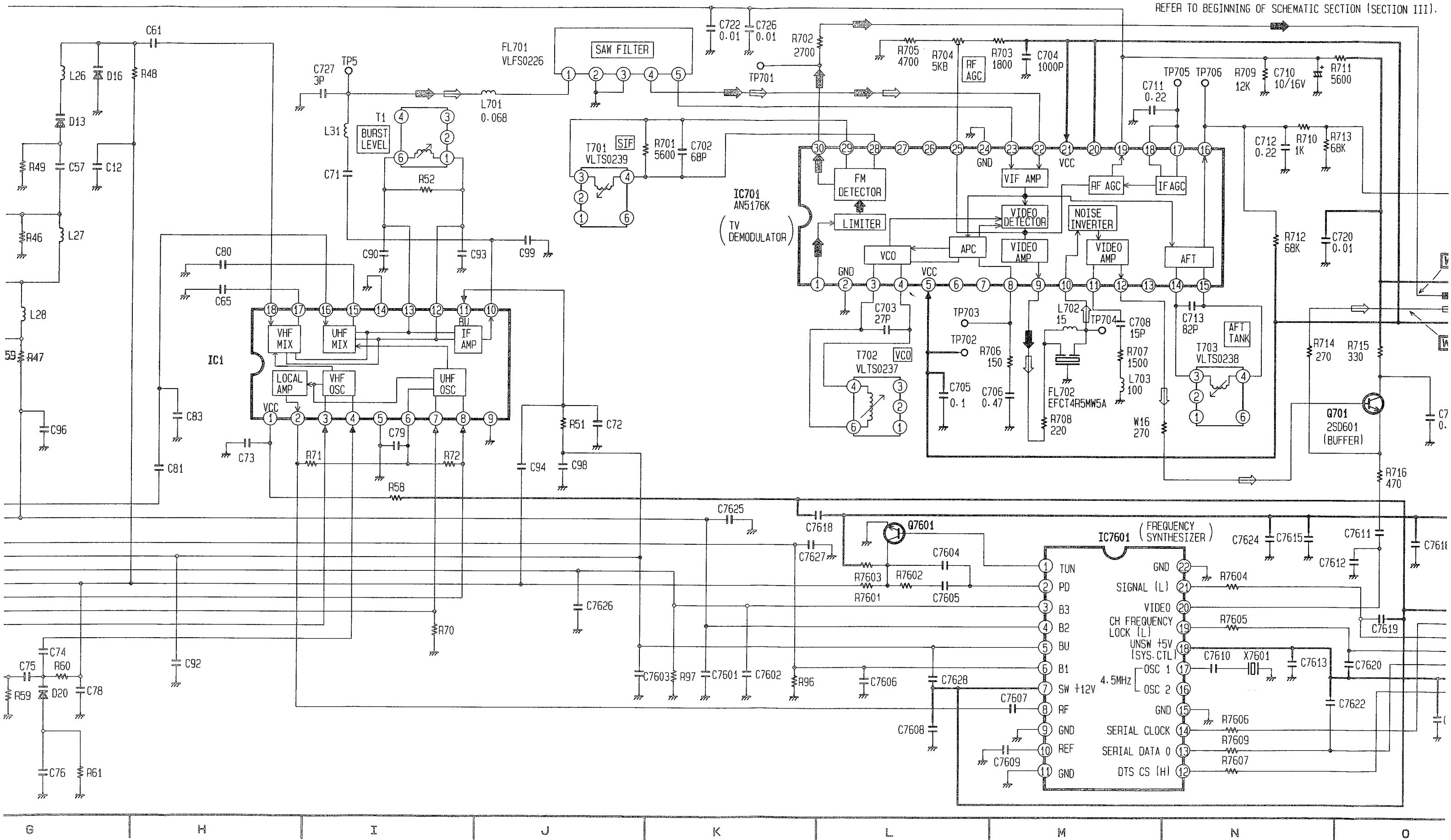
← VIDEO SIGNAL   ← AUDIO SIGNAL



F, G, H, I, J)

# "FOR REFERENCE ONLY"

NOTE:  
FOR SCHEMATIC AND C.B.A. DIAGRAM NOTES,  
REFER TO BEGINNING OF SCHEMATIC SECTION (SECTION III).



ONLY

NOTE:  
FOR SCHEMATIC AND C.B.A. DIAGRAM NOTES,  
REFER TO BEGINNING OF SCHEMATIC SECTION (SECTION III).

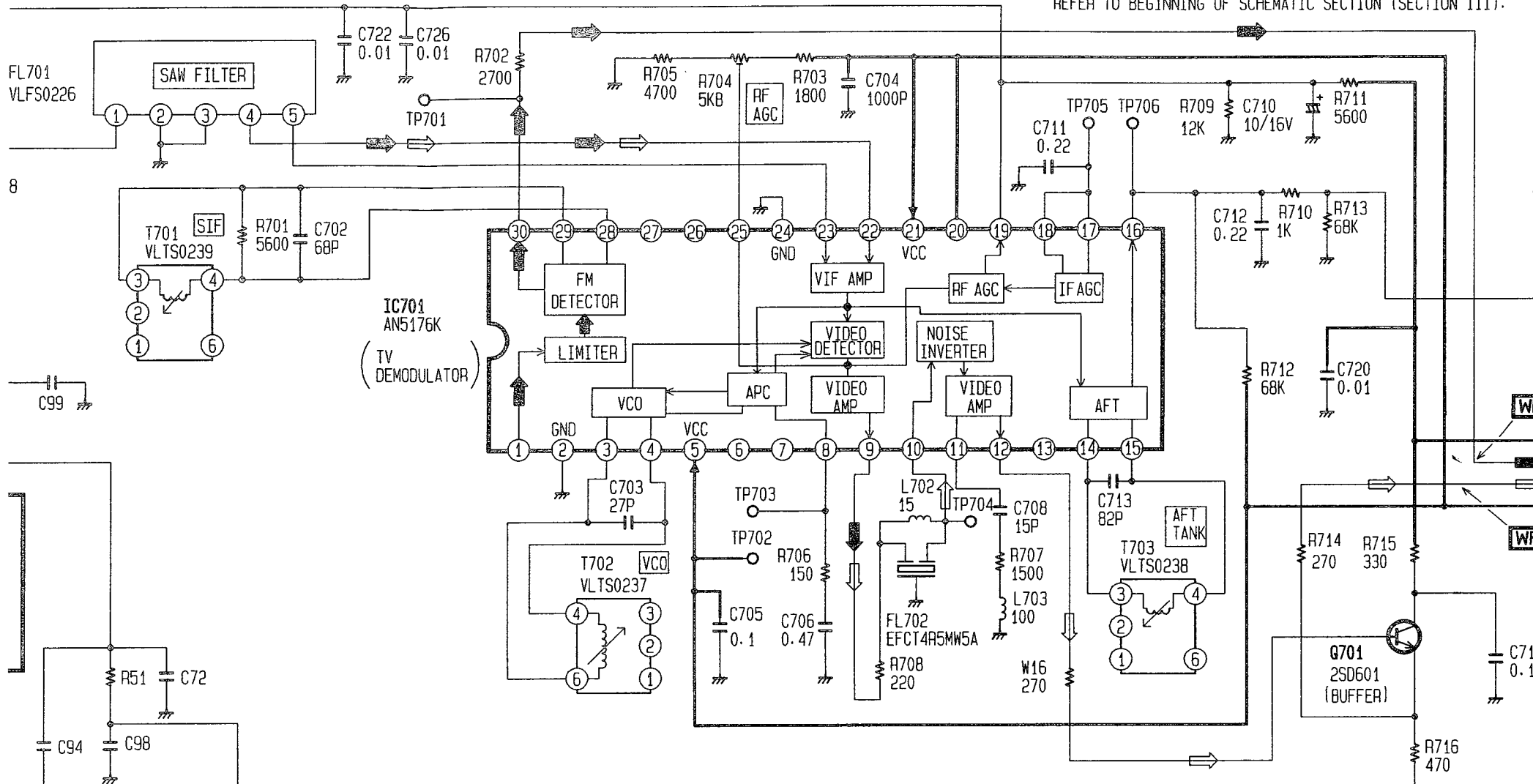
COMPARISON CHART  
OF MODELS & MARKS

MODEL	MARK
PV-M1326	A
PV-M1326W	B
VV1306	C
VV1306B	D
VV1316W	E
PV-M1346	F
PV-M1356W	G
PV-M2036	H
VV2006	I
VV2016W	J
PV-M2046	K
VV2706	L
NOT USED	Z

IMPORTANT NOTICE:

1 IF PARTS OF TUNER AND FS SECTION ARE  
REPLACED INDIVIDUALLY. THE FCC SPECIFICATIONS  
WILL NOT BE SATISFIED.  
DURING SERVICING. PLEASE REPLACE AS A UNIT.

2 SINCE THE UHF/VHF TUNER/TV DEMODULATOR UNIT  
HAS ALREADY BEEN PRE-ADJUSTED AT THE FACTORY,  
DO NOT TRY TO ADJUST THE UHF/VHF TUNER/TV DEMODULATOR UNIT.  
THE UHF/VHF TUNER/TV DEMODULATOR UNIT REPLACEMENT PART  
IS AVAILABLE ONLY AS A COMPLETE ASSEMBLY UNIT.



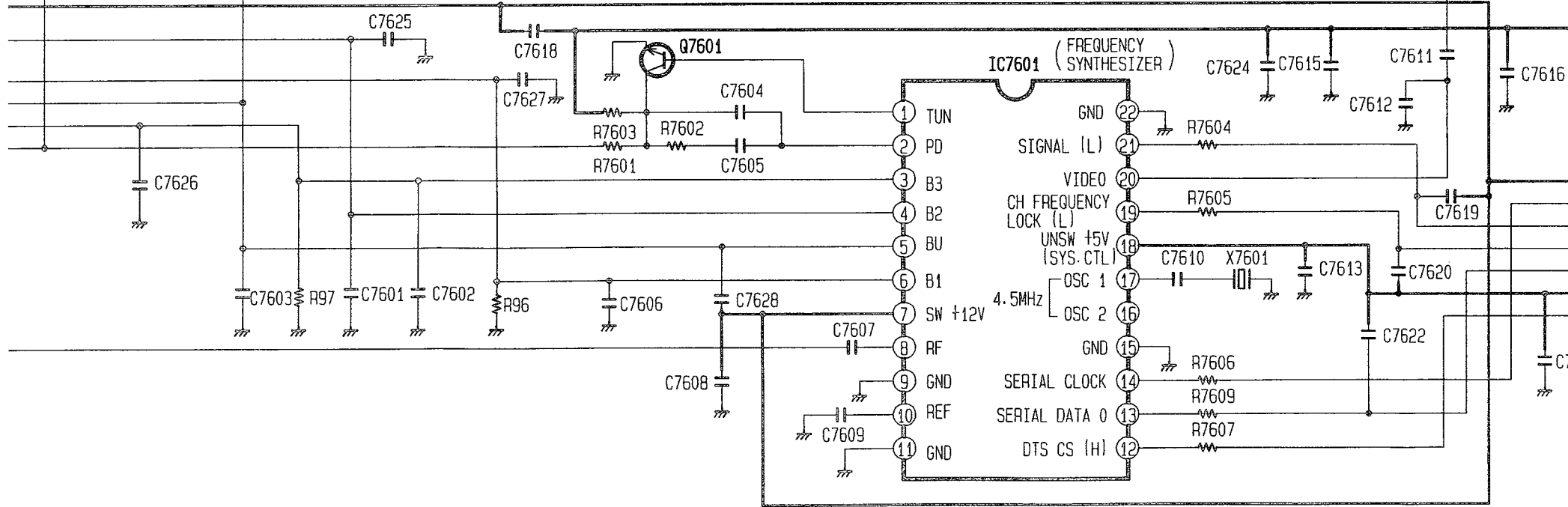
**P701 TO TV MAIN**

14	AFC	PIN-14
15	SW +12V	PIN-15
16	AUDIO	PIN-16
17	VIDEO	PIN-17
18	UNSW +5V (SYS. CTL)	PIN-18
19	GND	PIN-19

BAND SELECTION CHART

B2	B3	BU	CHANNEL
11V	0V	0V	2CH-6CH 5A, A-5-A-1, A, B
6V	11V	0V	7CH-13CH C-KK
0V	0V	11.5V	14CH-69CH 65CH-94CH (CATV) 100CH-125CH (CATV) LL-EEE

NOTE: THE VOLTAGES ARE APPROXIMATE.



**P7601 TO TV MAIN**

6	+30V	PIN-6
7	SW +12V	PIN-7
8	SERIAL CLOCK	PIN-8
9	TUNER SIGNAL (L)	PIN-9
10	CH FREQUENCY LOCK (L)	PIN-10
11	SERIAL DATA 0	PIN-11
12	UNSW +5V (SYS. CTL)	PIN-12
13	DTS CS (H)	PIN-13

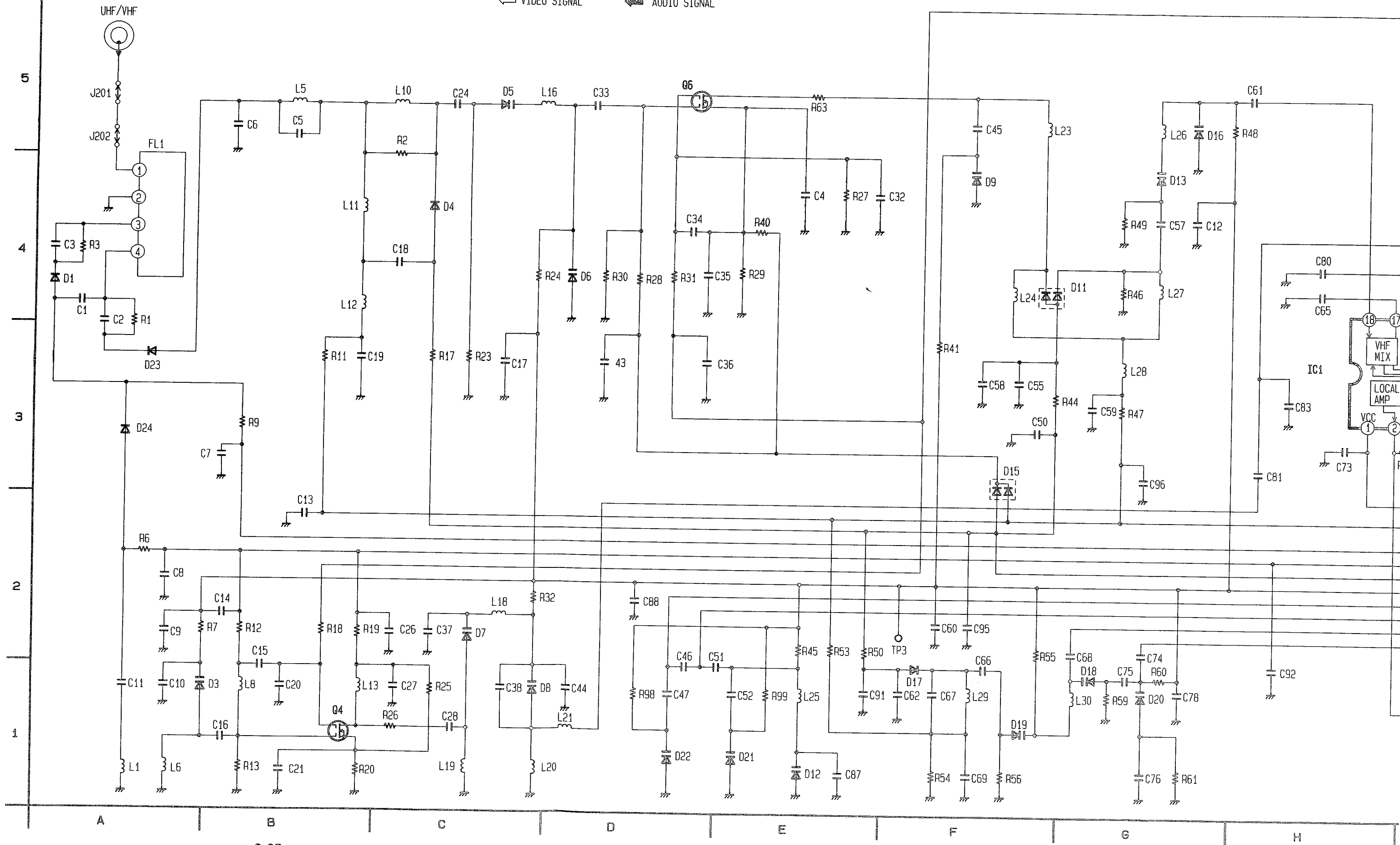
UNLESS OTHERWISE SPECIFIED:  
WATTAGE OF RESISTORS ARE 1/8W AND 1/16W.

VJBS07613

# UHF/VHF TUNER/TV DEMODULATOR SCHEMATIC DIAGRAM (K, L)

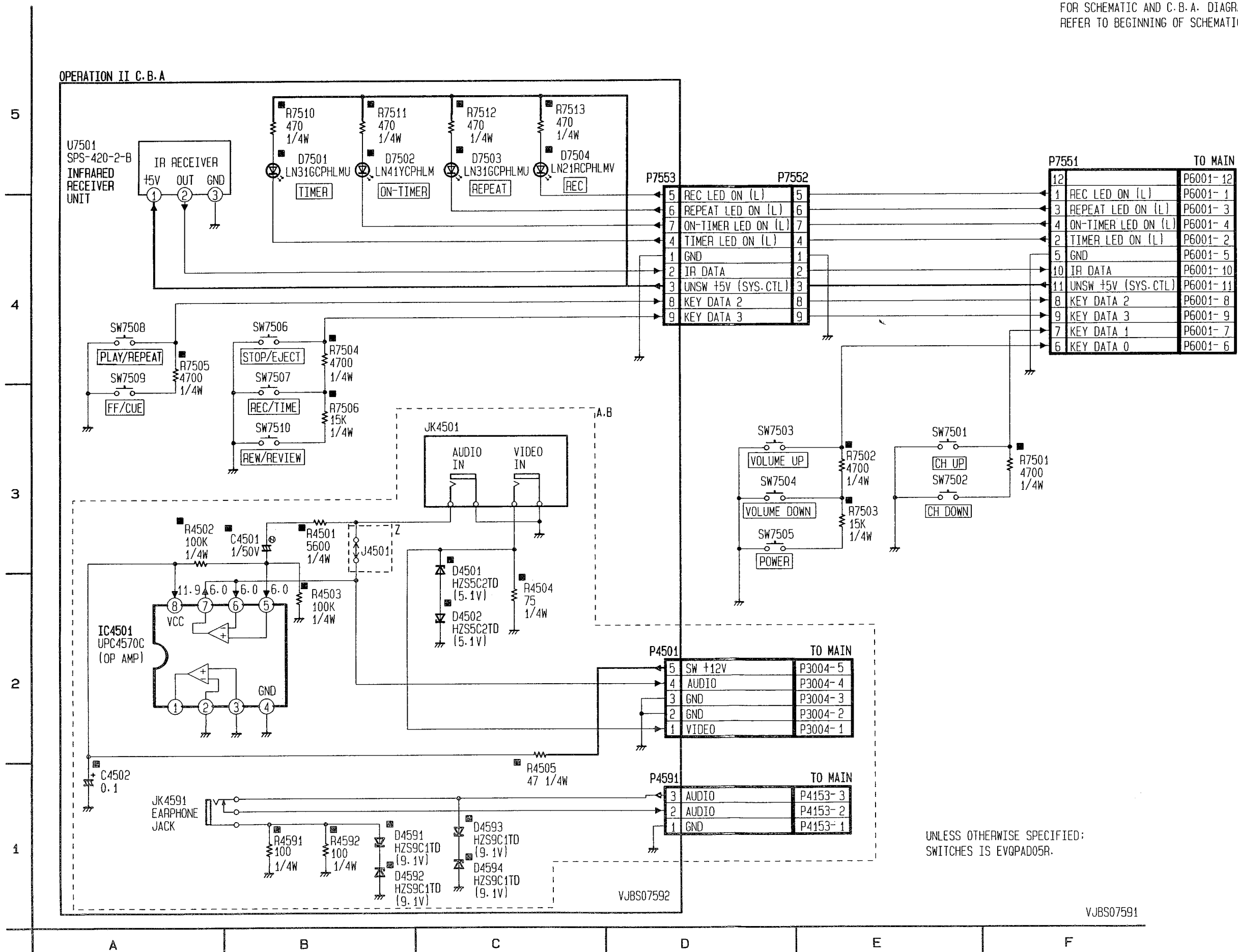
"FOR

← VIDEO SIGNAL   ← AUDIO SIGNAL



# OPERATION I/II SCHEMATIC DIAGRAM (A. B. C. D. E)

NOTE:  
FOR SCHEMATIC AND C.B.A. DIAGRAM NOTES,  
REFER TO BEGINNING OF SCHEMATIC SECTION (SECTION III).

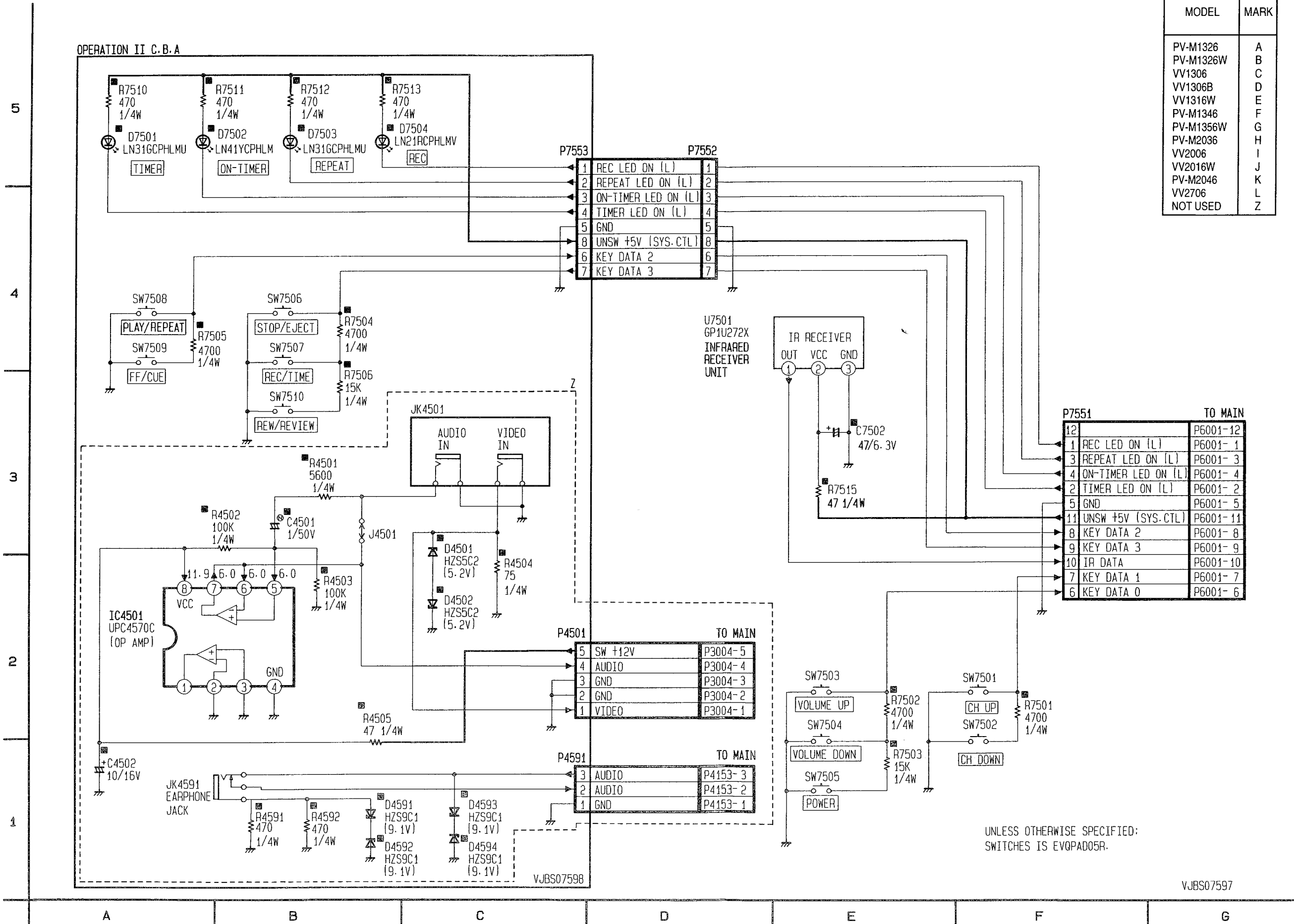




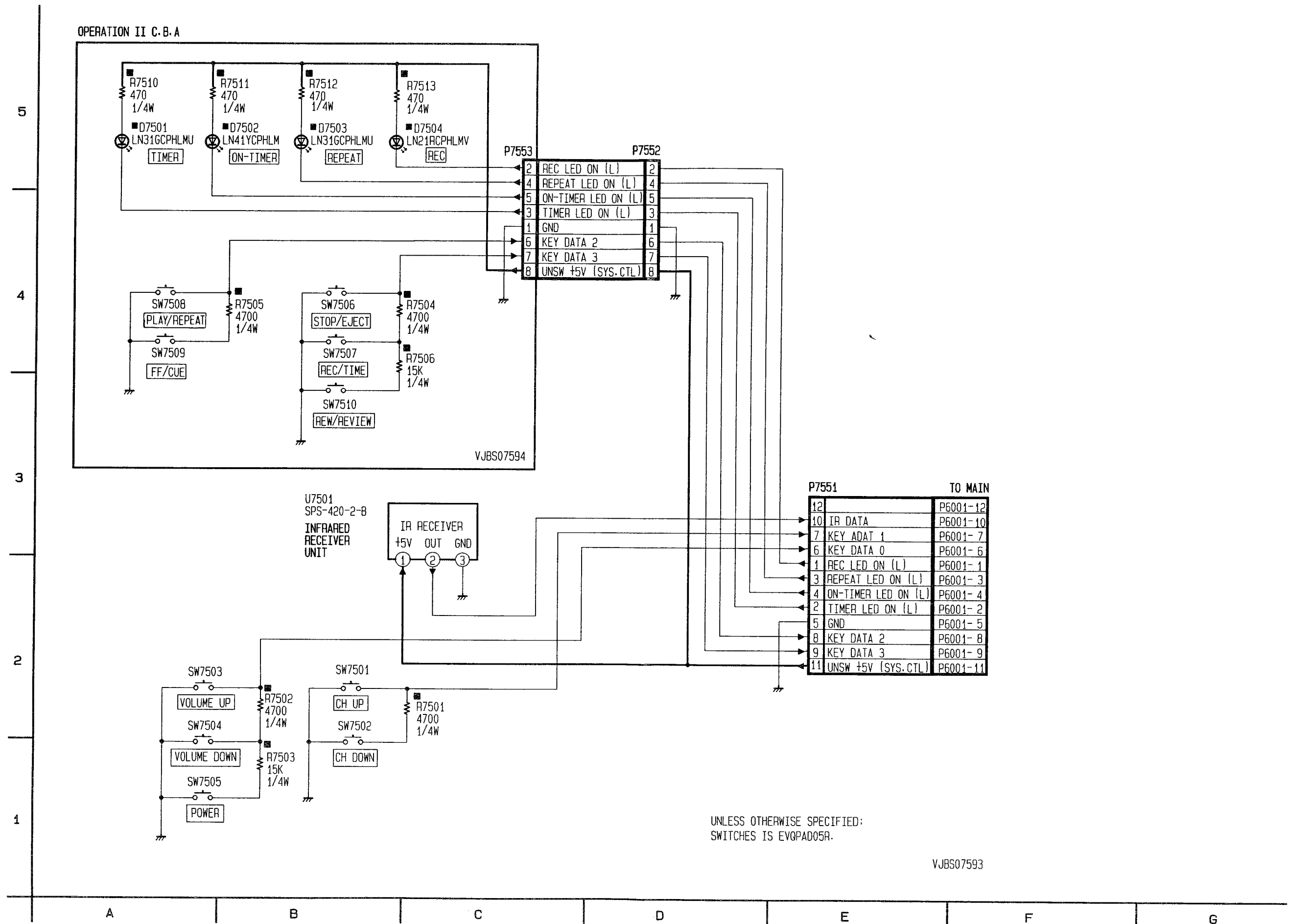
# OPERATION I/II SCHEMATIC DIAGRAM (F. G)

COMPARISON CHART OF MODELS & MARKS

MODEL	MARK
PV-M1326	A
PV-M1326W	B
VV1306	C
VV1306B	D
VV1316W	E
PV-M1346	F
PV-M1356W	G
PV-M2036	H
VV2006	I
VV2016W	J
PV-M2046	K
VV2706	L
NOT USED	Z



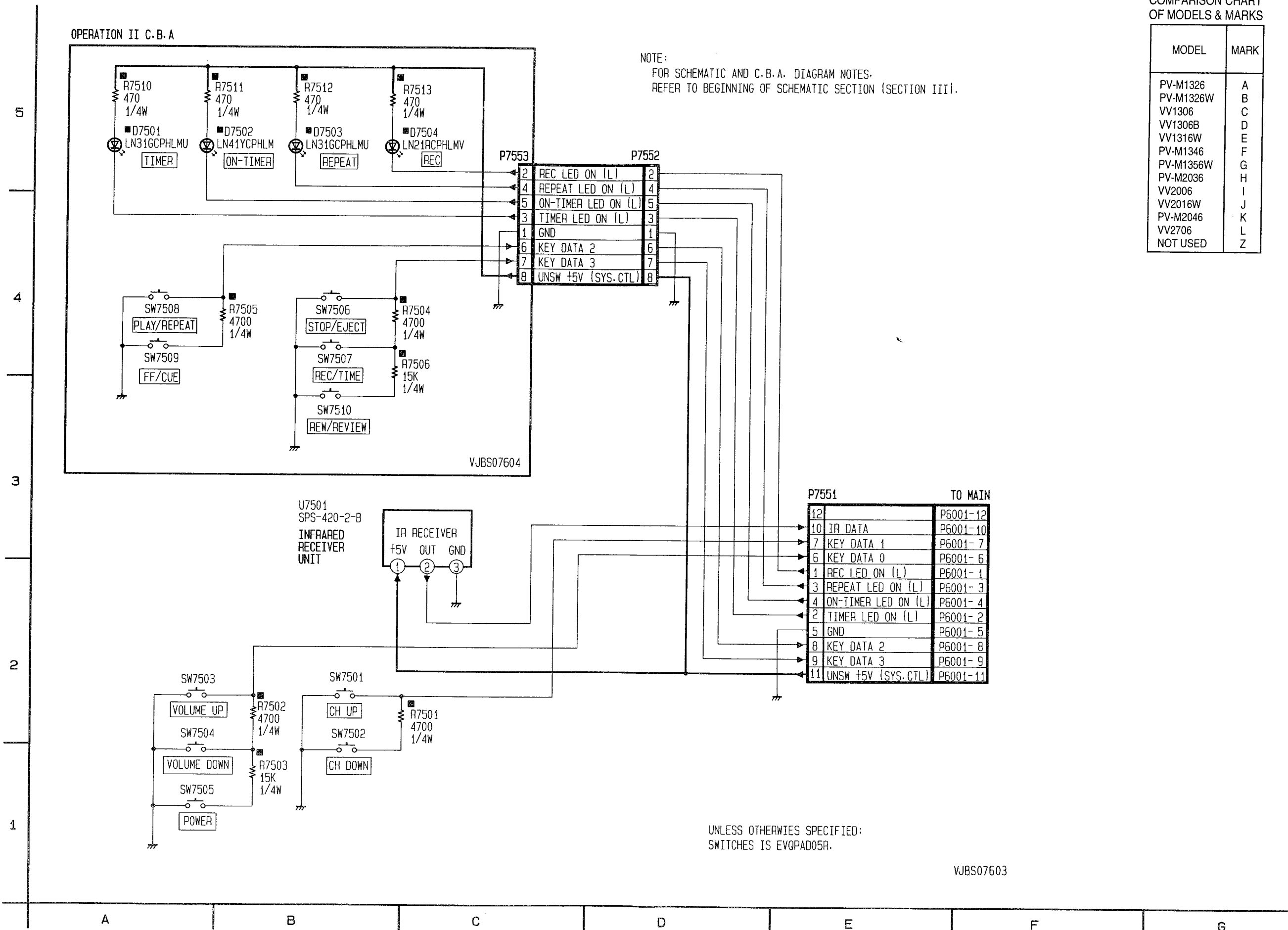
# OPERATION I/II SCHEMATIC DIAGRAM (H, K, L)



# OPERATION I/II SCHEMATIC DIAGRAM (I, J)

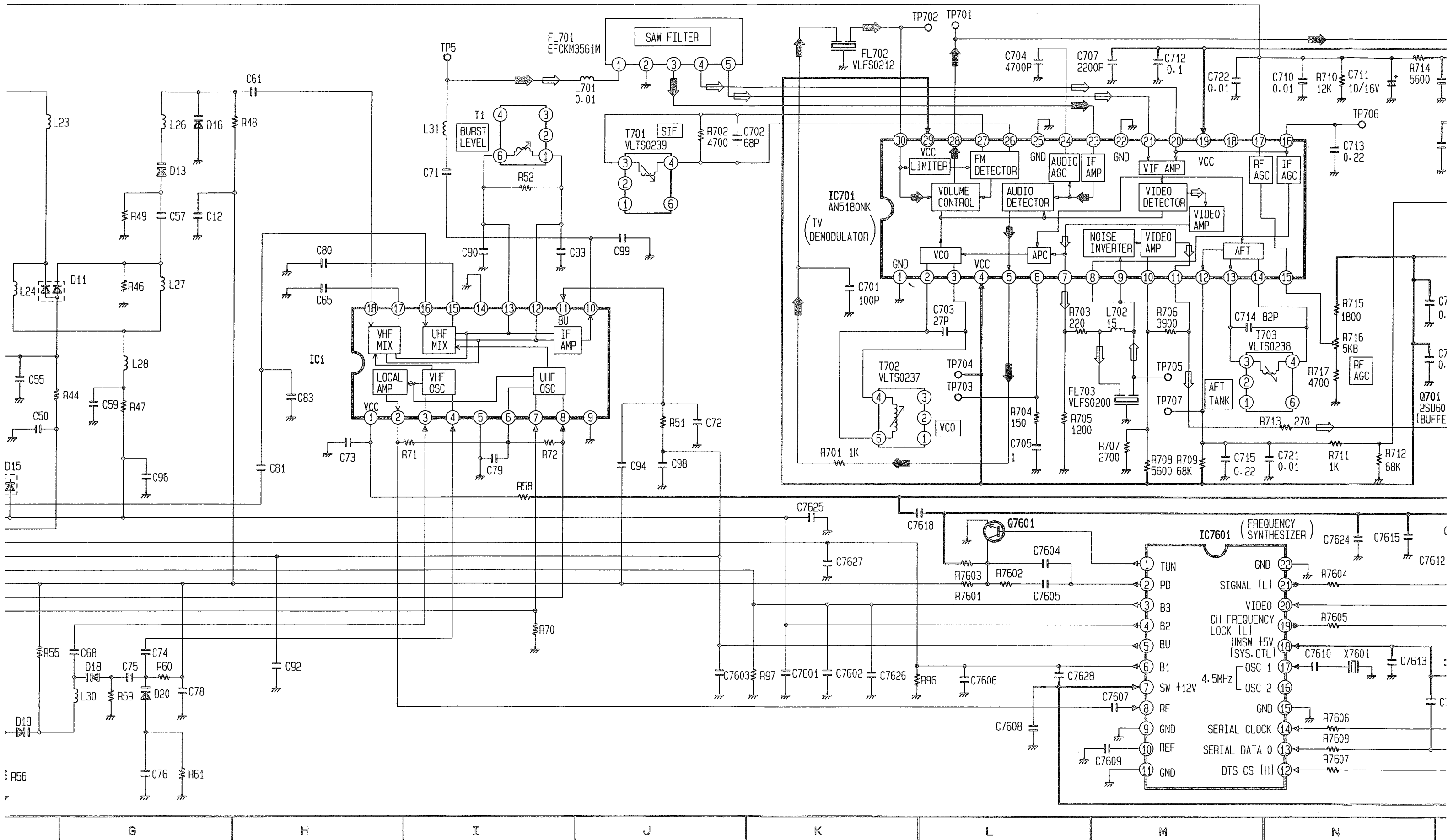
COMPARISON CHART  
OF MODELS & MARKS

MODEL	MARK
PV-M1326	A
PV-M1326W	B
VV1306	C
VV1306B	D
VV1316W	E
PV-M1346	F
PV-M1356W	G
PV-M2036	H
VV2006	I
VV2016W	J
PV-M2046	K
VV2706	L
NOT USED	Z



# "FOR REFERENCE ONLY"

NOTE:  
FOR SCHEMATIC AND C.B.A. DIAGRAM NOTES,  
REFER TO BEGINNING OF SCHEMATIC SECTION I



ONLY<sup>®</sup>

NOTE:  
FOR SCHEMATIC AND C.B.A. DIAGRAM NOTES,  
REFER TO BEGINNING OF SCHEMATIC SECTION (SECTION III).

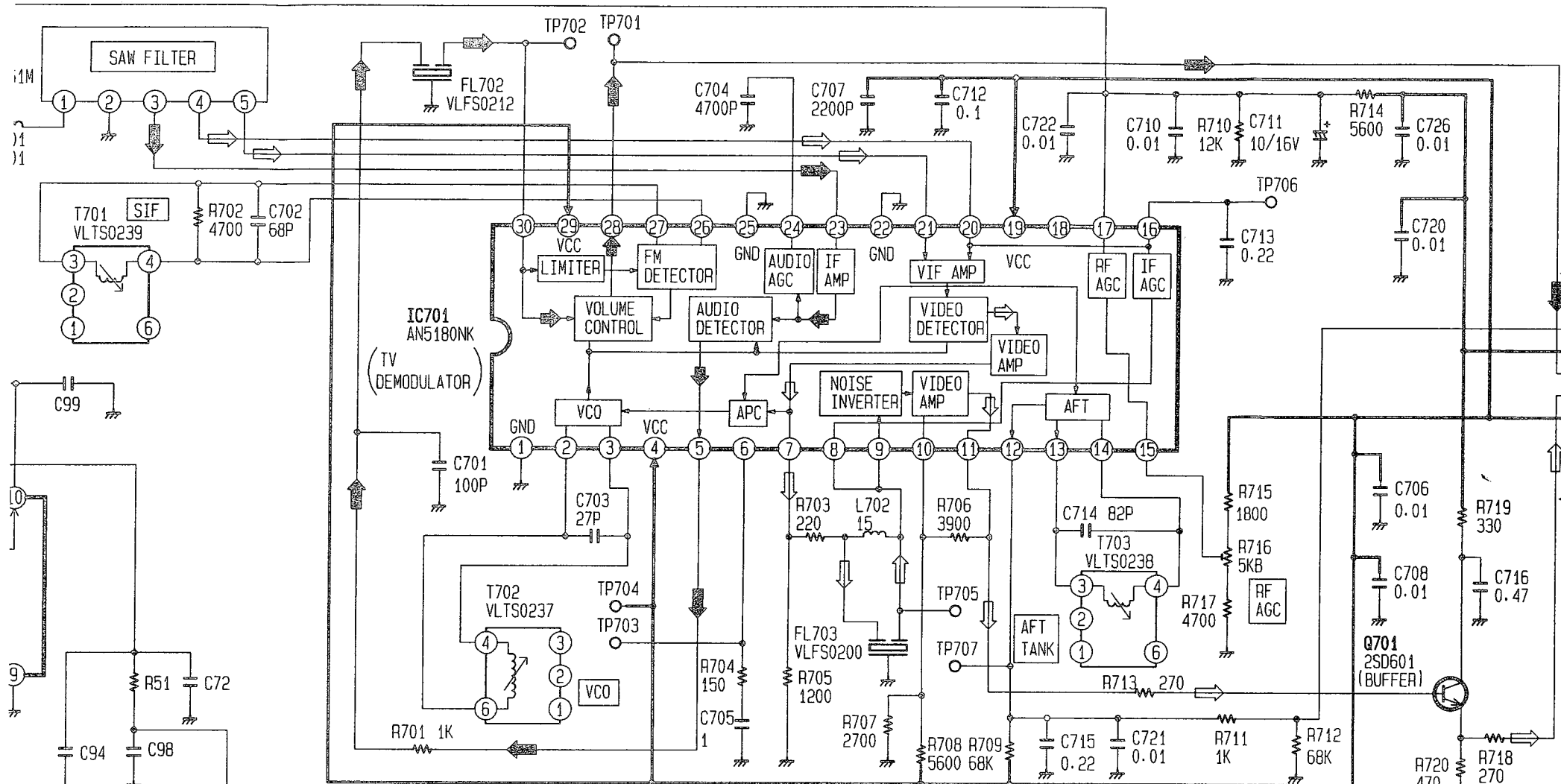
**IMPORTANT NOTICE:**

1 IF PARTS OF TUNER AND FS SECTION ARE REPLACED INDIVIDUALLY, THE FCC SPECIFICATIONS WILL NOT BE SATISFIED. DURING SERVICING, PLEASE REPLACE AS A UNIT.

2 SINCE THE UHF/VHF TUNER/TV DEMODULATOR UNIT HAS ALREADY BEEN PRE-ADJUSTED AT THE FACTORY, DO NOT TRY TO ADJUST THE UHF/VHF TUNER/TV DEMODULATOR UNIT. THE UHF/VHF TUNER/TV DEMODULATOR UNIT REPLACEMENT PART IS AVAILABLE ONLY AS A COMPLETE ASSEMBLY UNIT.

**COMPARISON CHART OF MODELS & MARKS**

MODEL	MARK
PV-M1326	A
PV-M1326W	B
VV1306	C
VV1306B	D
VV1316W	E
PV-M1346	F
PV-M1356W	G
PV-M2036	H
VV2006	I
VV2016W	J
PV-M2046	K
VV2706	L
NOT USED	Z



WF44

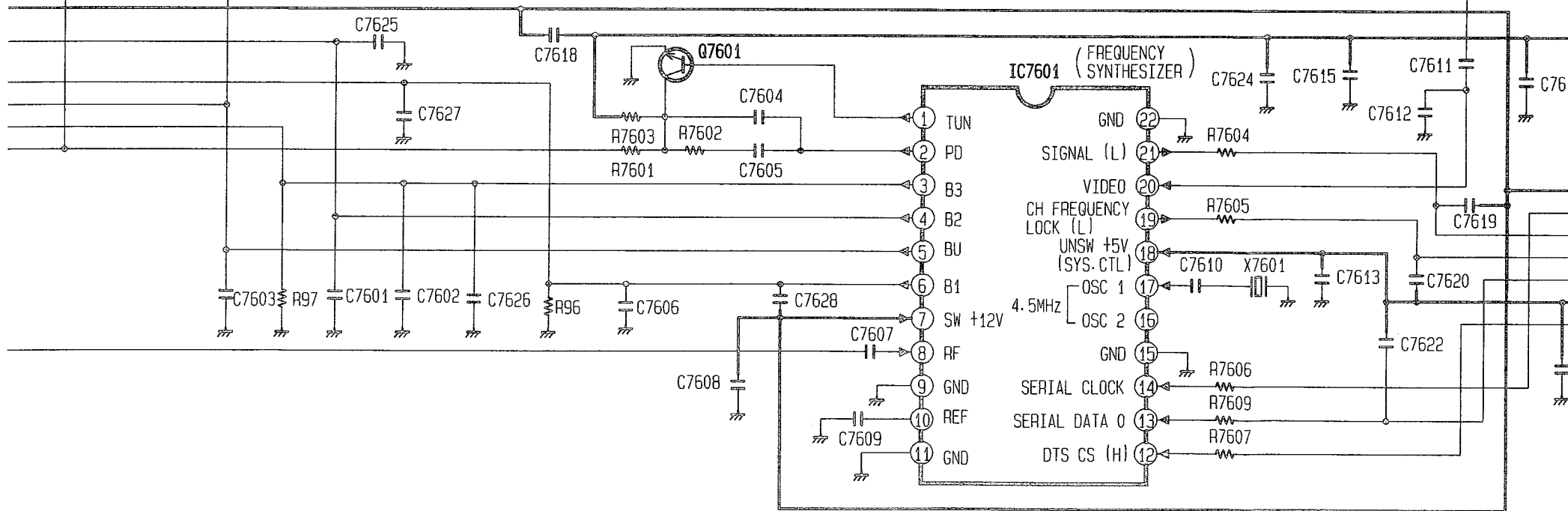
P701		TO MAIN
14	AFC	PIN-14
15	SW +12V	PIN-15
16	AUDIO	PIN-16
17	VIDEO	PIN-17
18	UNSW +5V (SYS. CTL)	PIN-18
19	GND	PIN-19

WF45

**BAND SELECTION CHART**

B2	B3	BU	CHANNEL
11V	0V	0V	2CH-6CH 5A, A-5-A-1, A, B
6V	11V	0V	7CH-13CH C-KK
0V	0V	11.5V	14CH-69CH 65CH-94CH (CATV) 100CH-125CH (CATV) LL-EEE

NOTE: THE VOLTAGES ARE APPROXIMATE.



WF45

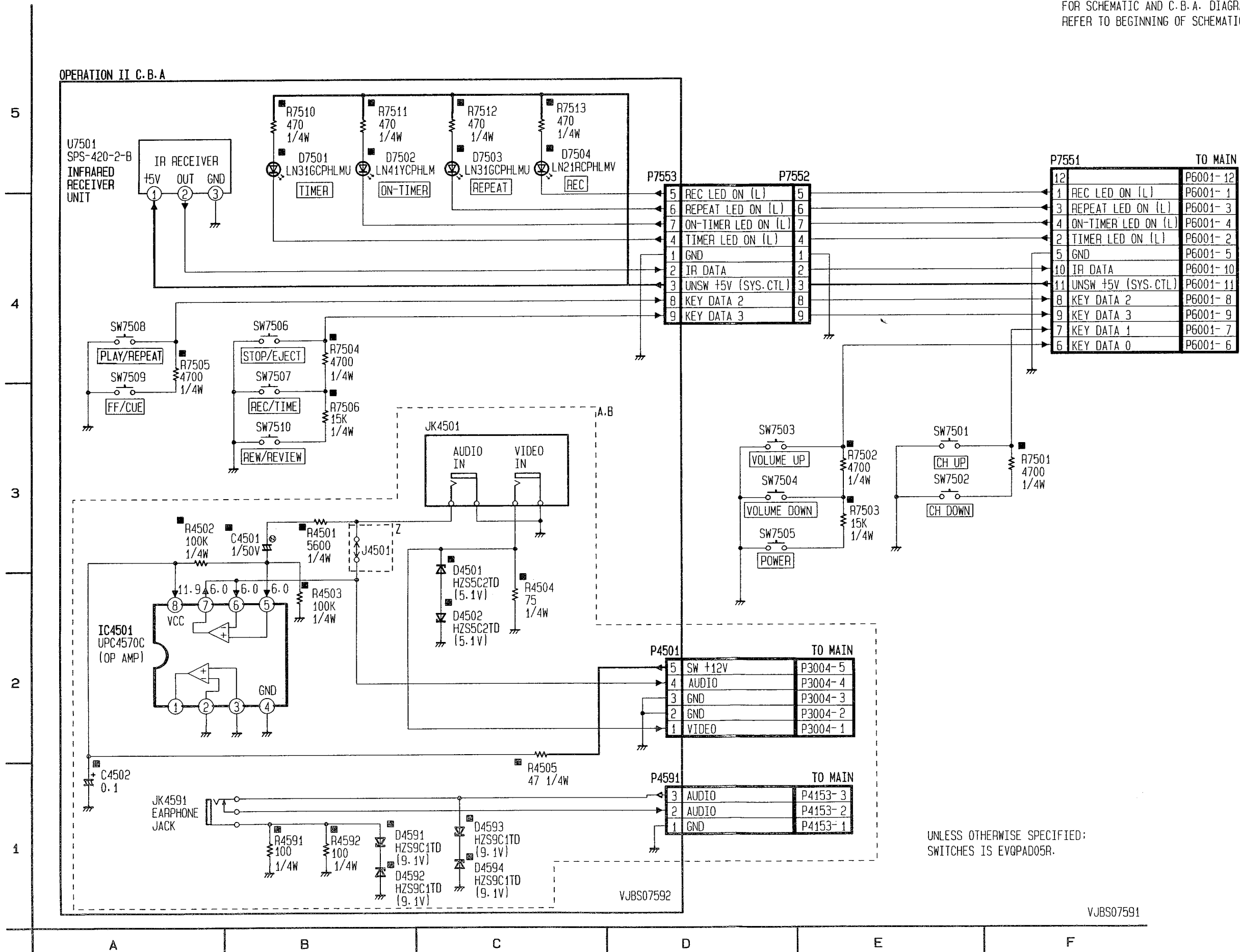
P7601		TO TV MAIN
6	+30V	PIN-6
7	SW +12V	PIN-7
8	SERIAL CLOCK	PIN-8
9	TUNER SIGNAL (L)	PIN-9
10	CH FREQUENCY LOCK (L)	PIN-10
11	SERIAL DATA 0	PIN-11
12	UNSW +5V (SYS. CTL)	PIN-12
13	DTS CS (H)	PIN-13

UNLESS OTHERWISE SPECIFIED:  
WATTAGE OF RESISTORS ARE 1/8W AND 1/16W.

VJBS07614

# OPERATION I/II SCHEMATIC DIAGRAM (A. B. C. D. E)

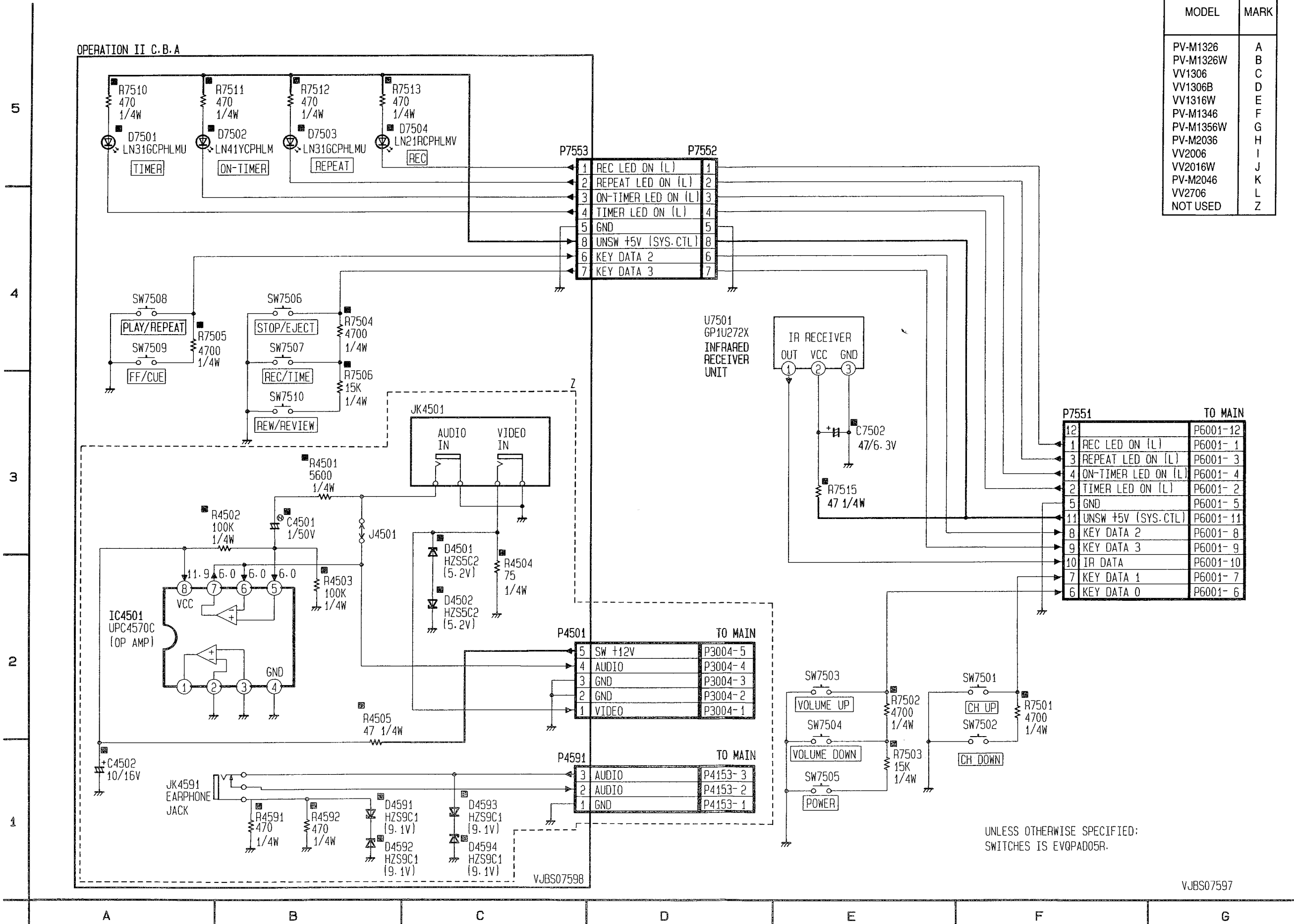
NOTE:  
FOR SCHEMATIC AND C.B.A. DIAGRAM NOTES,  
REFER TO BEGINNING OF SCHEMATIC SECTION (SECTION III).



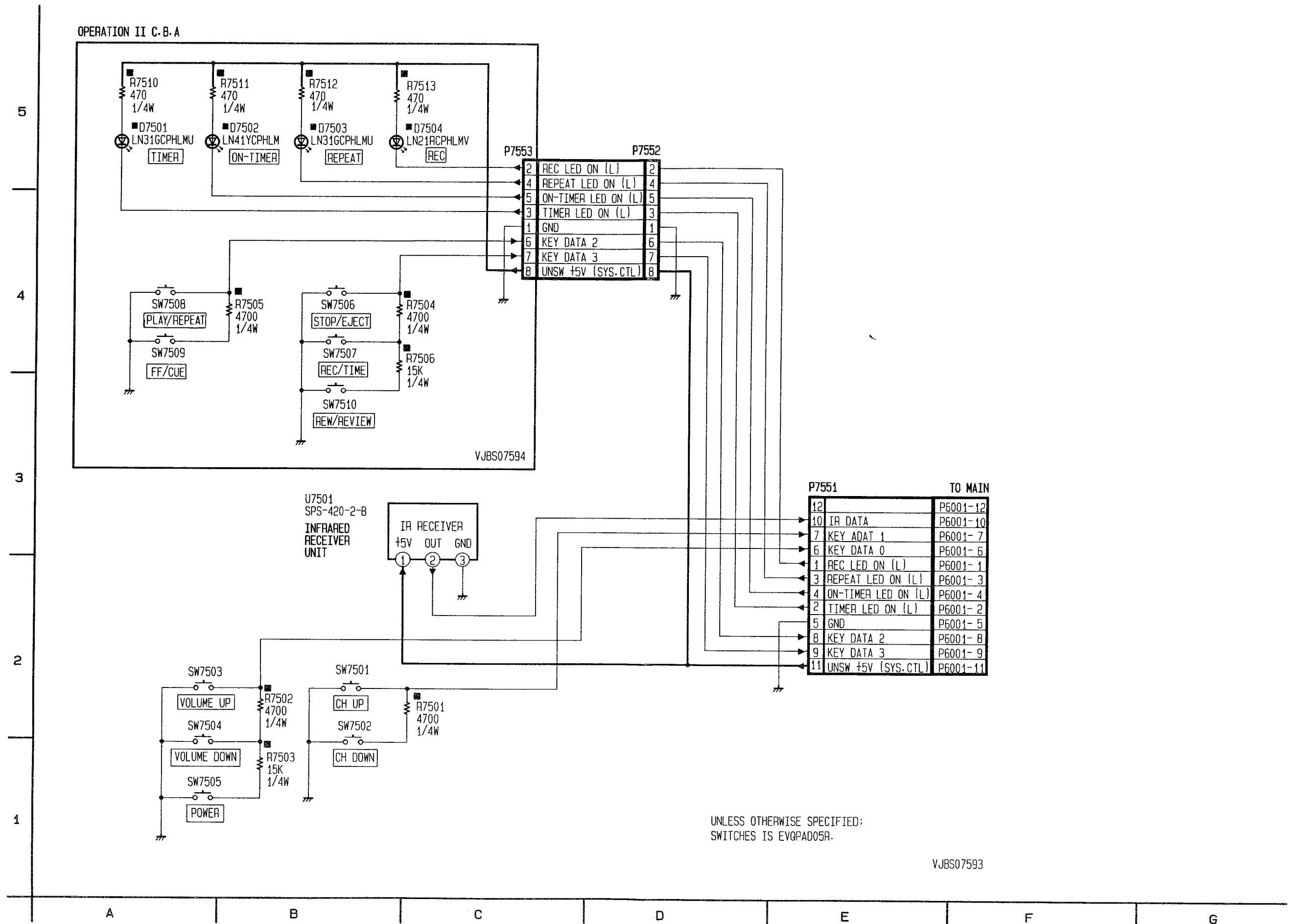
# OPERATION I/II SCHEMATIC DIAGRAM (F. G)

COMPARISON CHART OF MODELS & MARKS

MODEL	MARK
PV-M1326	A
PV-M1326W	B
VV1306	C
VV1306B	D
VV1316W	E
PV-M1346	F
PV-M1356W	G
PV-M2036	H
VV2006	I
VV2016W	J
PV-M2046	K
VV2706	L
NOT USED	Z



# OPERATION I/II SCHEMATIC DIAGRAM (H, K, L)

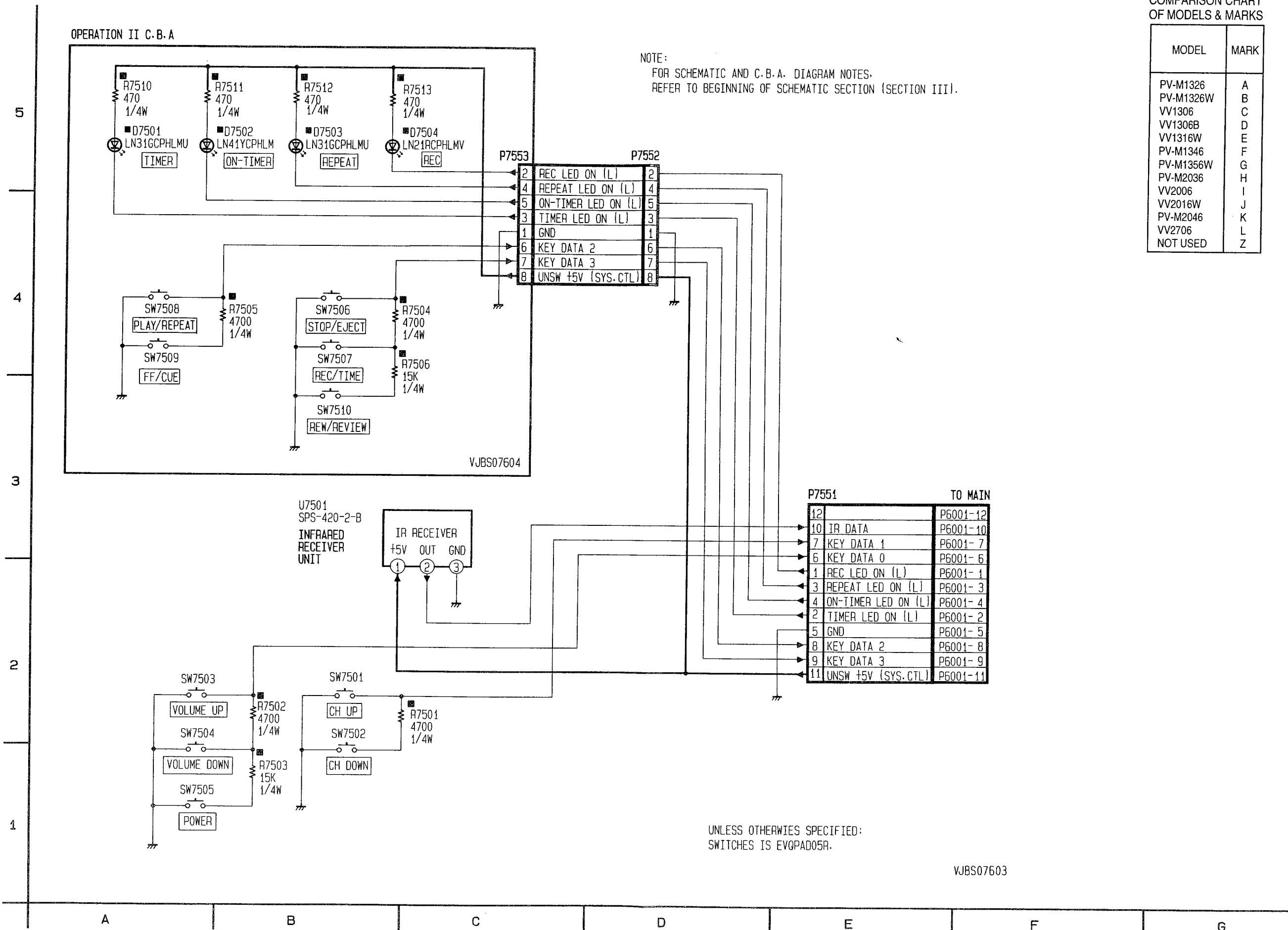




# OPERATION I/II SCHEMATIC DIAGRAM (I, J)

COMPARISON CHART  
OF MODELS & MARKS

MODEL	MARK
PV-M1326	A
PV-M1326W	B
VV1306	C
VV1306B	D
VV1316W	E
PV-M1346	F
PV-M1356W	G
PV-M2036	H
VV2006	I
VV2016W	J
PV-M2046	K
VV2706	L
NOT USED	Z



NOTE:  
FOR SCHEMATIC AND C.B.A. DIAGRAM NOTES,  
REFER TO BEGINNING OF SCHEMATIC SECTION (SECTION III).

P7551		TO MAIN
12	IR DATA	P6001-12
10	KEY DATA 1	P6001-10
7	KEY DATA 0	P6001-7
6	REC LED ON (L)	P6001-6
1	REPEAT LED ON (L)	P6001-1
3	ON-TIMER LED ON (L)	P6001-3
4	TIMER LED ON (L)	P6001-4
2	GND	P6001-5
8	KEY DATA 2	P6001-8
9	KEY DATA 3	P6001-9
11	UNSW +5V (SYS.CTL)	P6001-11

UNLESS OTHERWISE SPECIFIED:  
SWITCHES IS EVGPAD05R.

VJBS07603

# HEAD AMP SCHEMATIC DIAGRAM (A, B, C, D, E, H, I, J, L)

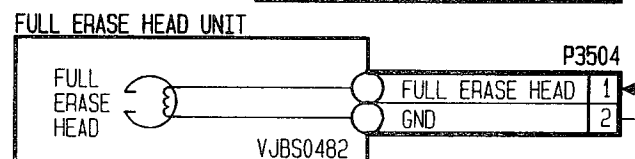
← REC VIDEO SIGNAL   ← PB VIDEO SIGNAL   ← CYLINDER SERVO

5  
4  
3  
2  
1

HEAD AMP	
IC	
IC2601	D-4
IC3501	F-3
CONNECTOR	
P3501	B-5
P3502	B-3
P3503	B-2
P3504	B-3
TEST POINT	
TP3501	C-1

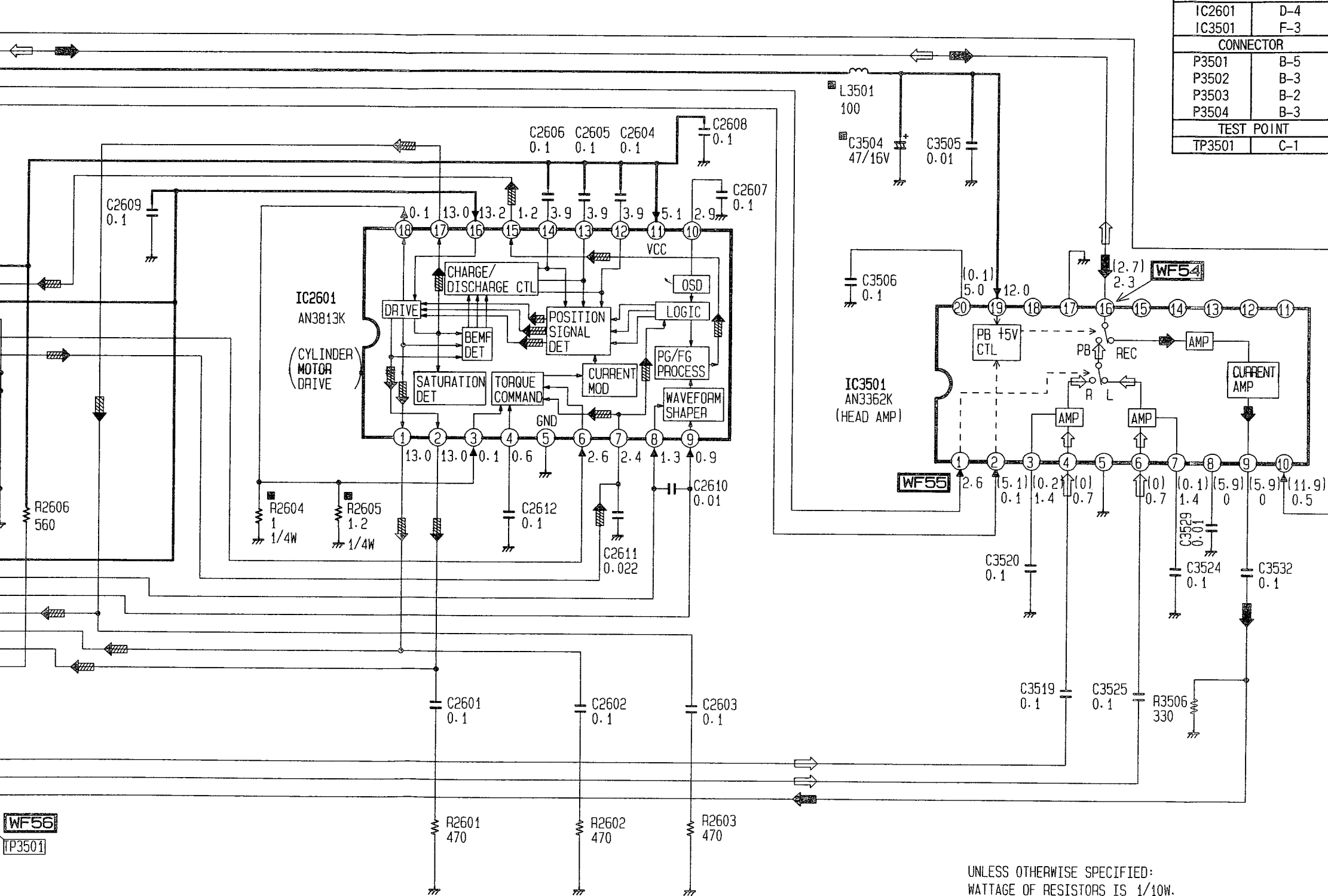
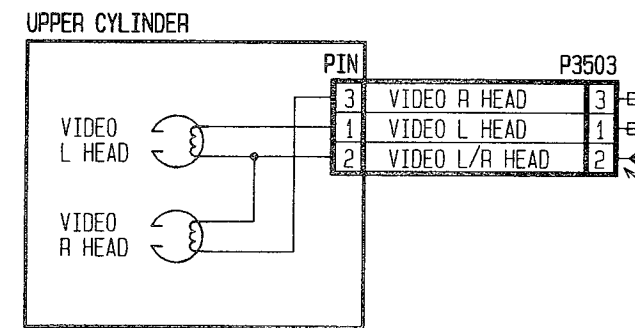
TO MAIN P3501

P3003-13	DELAY REC +12V	13
P3003-16	REC/PB VIDEO	16
P3003-15	SW +12V	15
P3003-20	HEAD SW	20
P3003-17	PB (L)	17
P3003-10		10
P3003-9		9
P3003-8		8
P3003-11		11
P3003-7		7
P3003-14		14
P3003-18		18
P3003-19		19
P3003-6	UNSW +5V (SYS. CTL)	6
P3003-2	CYL PG/FG	2
P3003-4	UNSW +14V	4
P3003-1	GND	1
P3003-5	V-REF	5
P3003-3	CYL ERROR	3
P3003-12	GND	12
P3003-21	GND	21
P3003-22	FULL ERASE HEAD	22



TO D-D CYLINDER P3502

PIN- 8	UNSW +14V	8
PIN- 4	HE-	4
PIN- 6	HE+	6
PIN- 1	MAIN COIL 3	1
PIN- 2	MAIN COIL 2	2
PIN- 3	MAIN COIL 1	3
PIN- 5	VH+	5
PIN- 7	GND	7



UNLESS OTHERWISE SPECIFIED:  
WATTAGE OF RESISTORS IS 1/10W.

VJBS5001

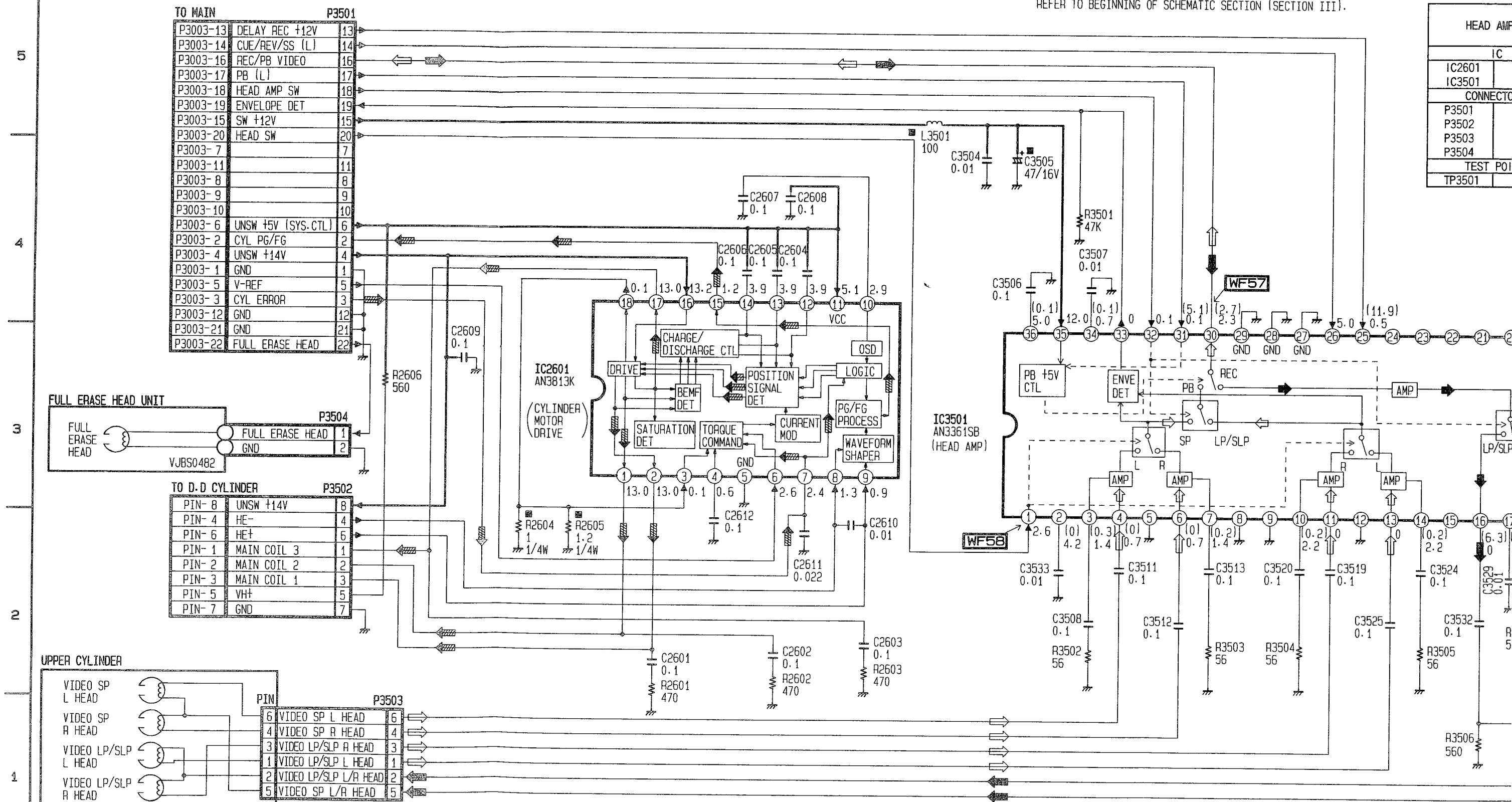
A B C D E F G H

# HEAD AMP SCHEMATIC DIAGRAM (F, G, K)

← REC VIDEO SIGNAL   ← PB VIDEO SIGNAL   ← CYLINDER SERVO

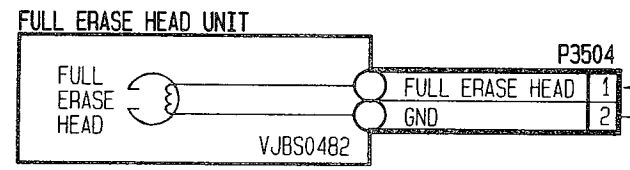
NOTE:  
FOR SCHEMATIC AND C.B.A. DIAGRAM NOTES,  
REFER TO BEGINNING OF SCHEMATIC SECTION (SECTION III).

HEAD AMP	
IC	
IC2601	
IC3501	
CONNECTOR	
P3501	
P3502	
P3503	
P3504	
TEST POINT	
TP3501	



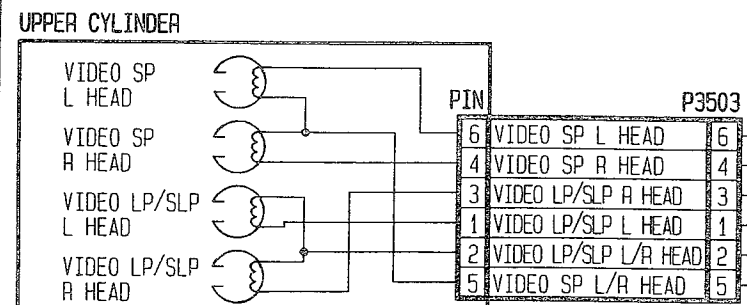
TO MAIN P3501

P3003-13	DELAY REC +12V	13
P3003-14	CUE/REV/SS (L)	14
P3003-16	REC/PB VIDEO	16
P3003-17	PB (L)	17
P3003-18	HEAD AMP SW	18
P3003-19	ENVELOPE DET	19
P3003-15	SW +12V	15
P3003-20	HEAD SW	20
P3003-7		7
P3003-11		11
P3003-8		8
P3003-9		9
P3003-10		10
P3003-6	UNSW +5V (SYS. CTL)	6
P3003-2	CYL PG/FG	2
P3003-4	UNSW +14V	4
P3003-1	GND	1
P3003-5	V-REF	5
P3003-3	CYL ERROR	3
P3003-12	GND	12
P3003-21	GND	21
P3003-22	FULL ERASE HEAD	22



TO D. D. CYLINDER P3502

PIN-8	UNSW +14V	8
PIN-4	HE-	4
PIN-6	HE+	6
PIN-1	MAIN COIL 3	1
PIN-2	MAIN COIL 2	2
PIN-3	MAIN COIL 1	3
PIN-5	VH+	5
PIN-7	GND	7



UNLESS OTHERWISE SPECIFIED:  
WATTAGE OF RESISTORS IS 1/10W.

A B C D E F G H

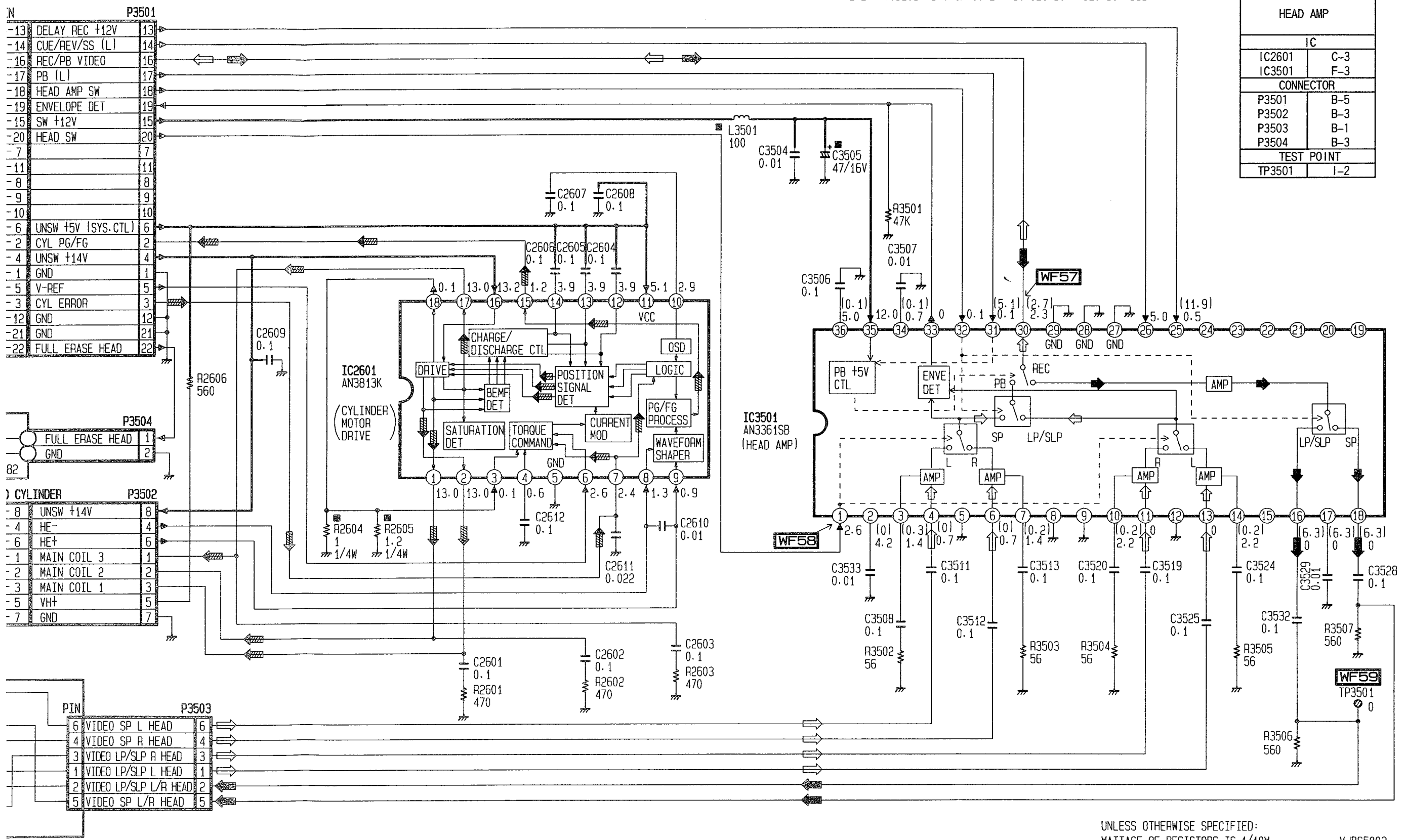
# SCHEMATIC DIAGRAM (F, G, K)

REC VIDEO SIGNAL    
  PB VIDEO SIGNAL    
  CYLINDER SERVO

NOTE:  
 FOR SCHEMATIC AND C.B.A. DIAGRAM NOTES,  
 REFER TO BEGINNING OF SCHEMATIC SECTION (SECTION III).

## COMPARISON CHART OF MODELS & MARKS

MODEL	MARK
PV-M1326	A
PV-M1326W	B
VV1306	C
VV1306B	D
VV1316W	E
PV-M1346	F
PV-M1356W	G
PV-M2036	H
VV2006	I
VV2016W	J
PV-M2046	K
VV2706	L
NOT USED	Z



HEAD AMP	
IC	
IC2601	C-3
IC3501	F-3
CONNECTOR	
P3501	B-5
P3502	B-3
P3503	B-1
P3504	B-3
TEST POINT	
TP3501	I-2

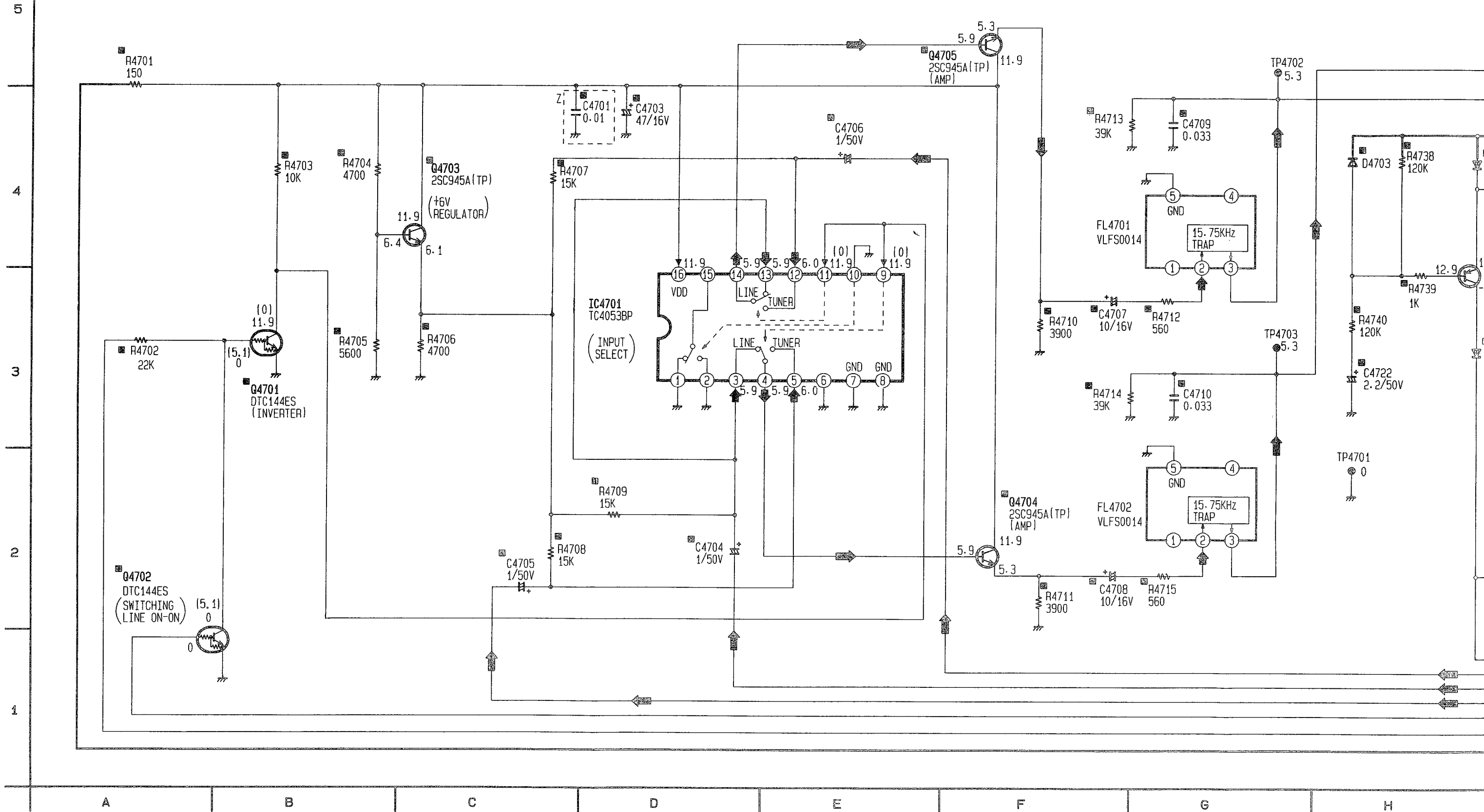
UNLESS OTHERWISE SPECIFIED:  
 WATTAGE OF RESISTORS IS 1/10W.

VJBS5002

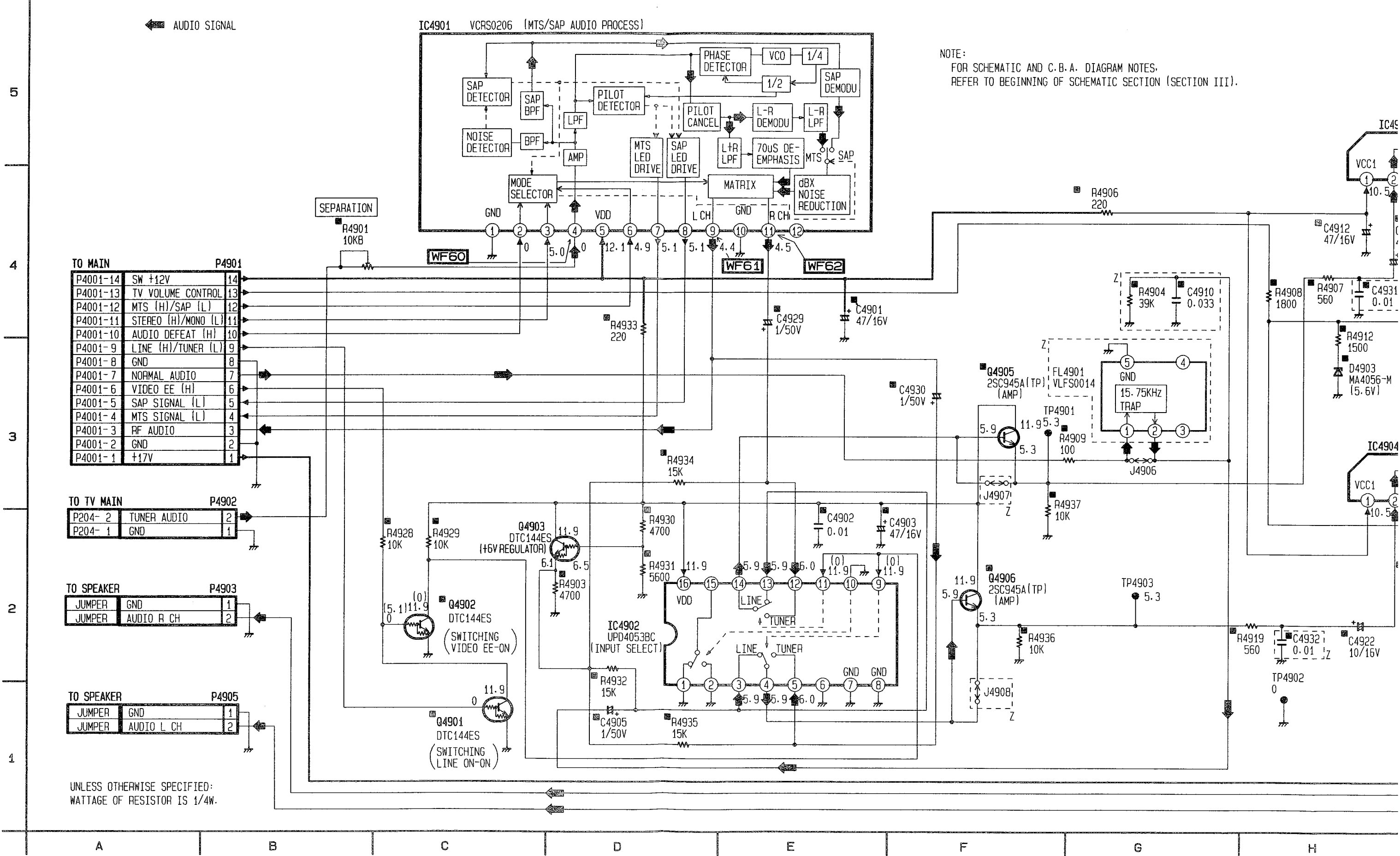
# TV STEREO SCHEMATIC DIAGRAM (L)

← AUDIO SIGNAL

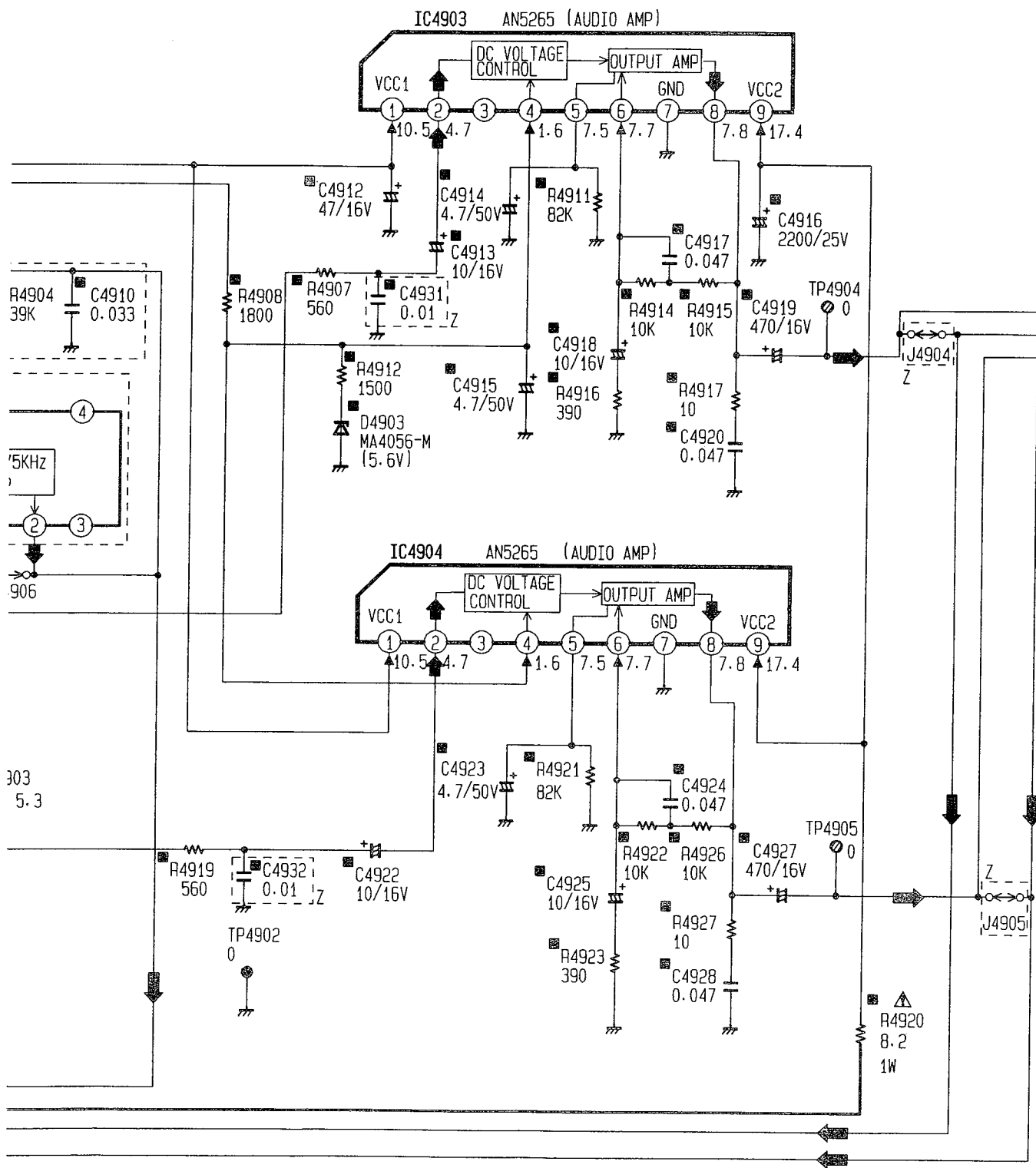
NOTE:  
FOR SCHEMATIC AND C.B.A. DIAGRAM NOTES,  
REFER TO BEGINNING OF SCHEMATIC SECTION (SECTION III).



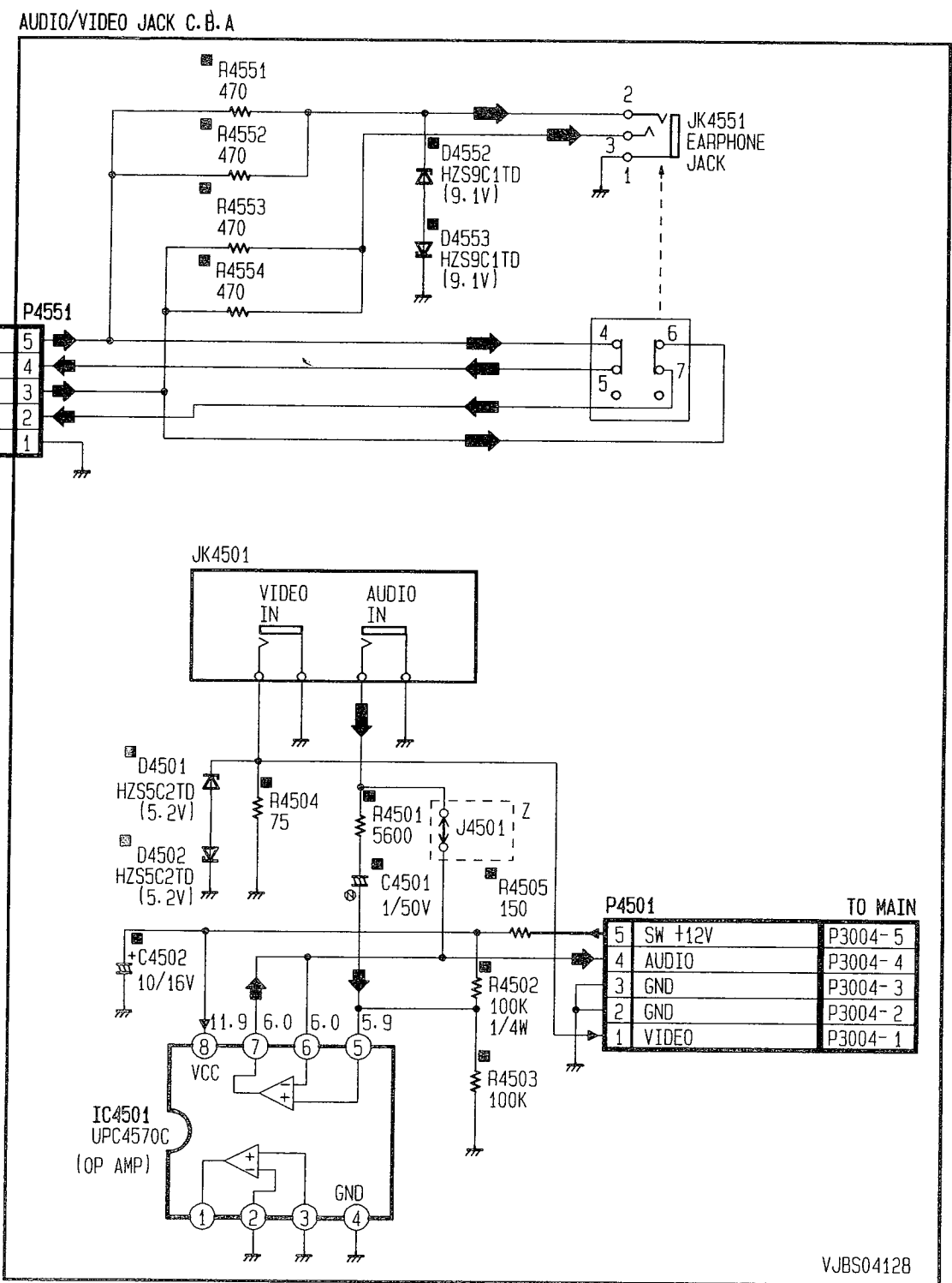
# TV STEREO AMP / A/V JACK SCHEMATIC DIAGRAM (K)



TES.  
TION (SECTION III).



VJBS4006



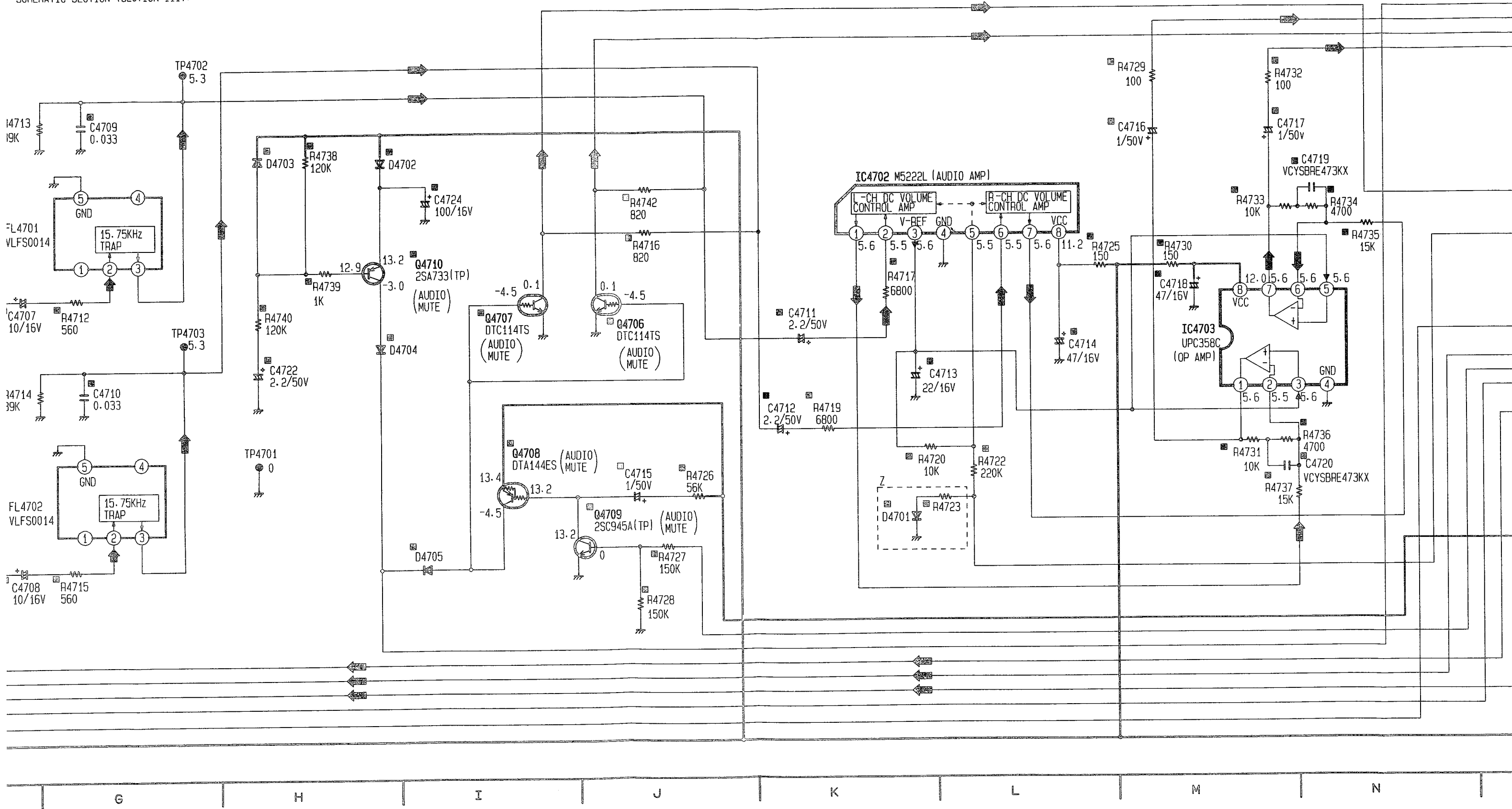
VJBS04128

COMPARISON CHART  
OF MODELS & MARKS

MODEL	MARK
PV-M1326	A
PV-M1326W	B
VV1306	C
VV1306B	D
VV1316W	E
PV-M1346	F
PV-M1356W	G
PV-M2036	H
VV2006	I
VV2016W	J
PV-M2046	K
VV2706	L
NOT USED	Z

TV STEREO AMP	
TRANSISTOR	
Q4901	C-1
Q4902	C-2
Q4903	C-2
Q4905	F-3
Q4906	F-2
IC	
IC4901	C-5
IC4902	D-2
IC4903	H-5
IC4904	H-3
CONNECTOR	
P4901	B-4
P4902	B-3
P4903	B-2
P4904	K-4
P4905	B-1
TEST POINT	
TP4901	F-3
TP4902	H-2
TP4903	G-3
TP4904	J-4
TP4905	J-2
ADJUSTMENT	
R4901	B-4

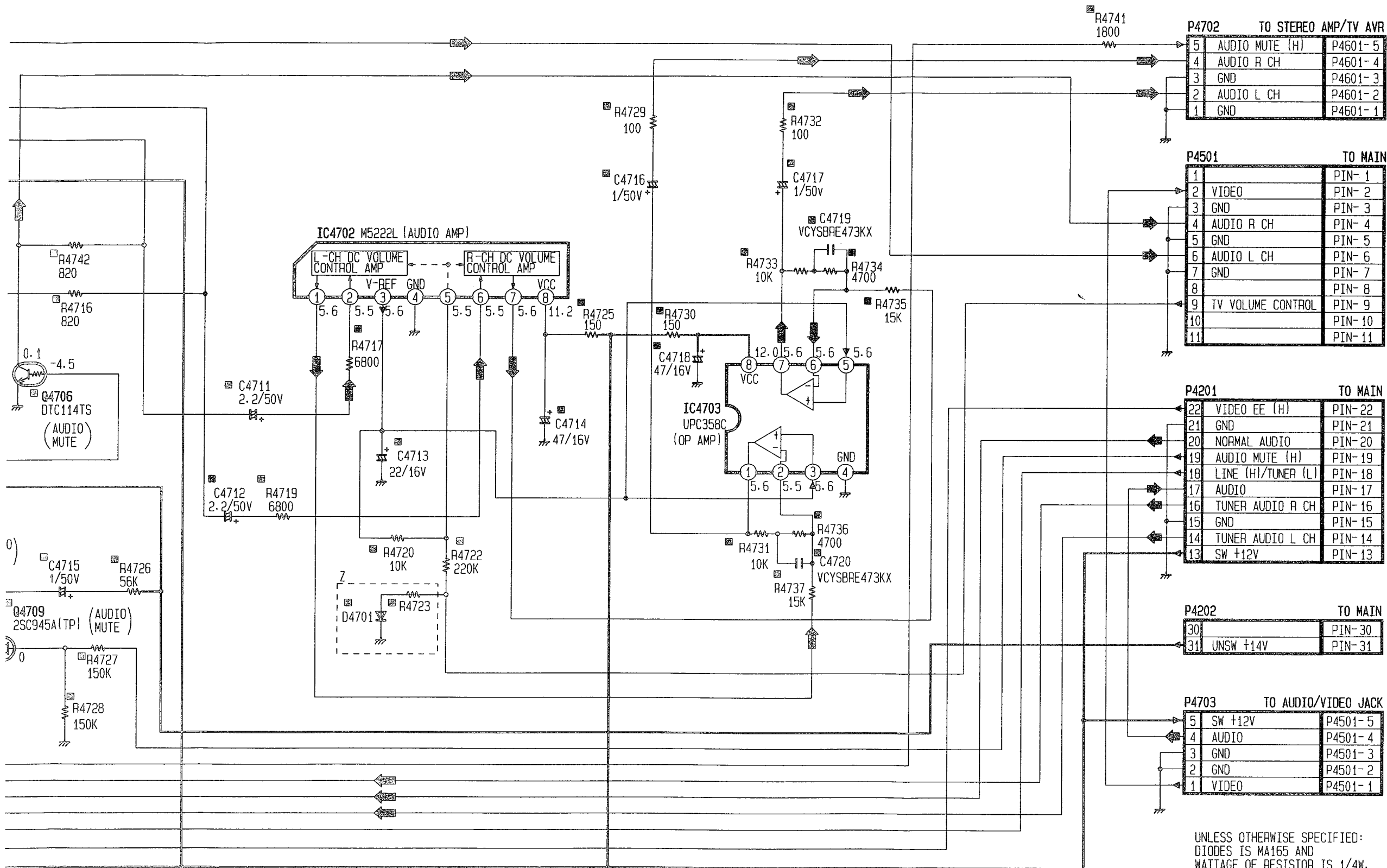
3. A. DIAGRAM NOTES:  
 F SCHEMATIC SECTION (SECTION III).





COMPARISON CHART OF MODELS & MARKS

MODEL	MARK
PV-M1326	A
PV-M1326W	B
VV1306	C
VV1306B	D
VV1316W	E
PV-M1346	F
PV-M1356W	G
PV-M2036	H
VV2006	I
VV2016W	J
PV-M2046	K
VV2706	L
NOT USED	Z



**P4702 TO STEREO AMP/TV AVR**

5	AUDIO MUTE (H)	P4601-5
4	AUDIO R CH	P4601-4
3	GND	P4601-3
2	AUDIO L CH	P4601-2
1	GND	P4601-1

**P4501 TO MAIN**

1		PIN-1
2	VIDEO	PIN-2
3	GND	PIN-3
4	AUDIO R CH	PIN-4
5	GND	PIN-5
6	AUDIO L CH	PIN-6
7	GND	PIN-7
8		PIN-8
9	TV VOLUME CONTROL	PIN-9
10		PIN-10
11		PIN-11

**P4201 TO MAIN**

22	VIDEO EE (H)	PIN-22
21	GND	PIN-21
20	NORMAL AUDIO	PIN-20
19	AUDIO MUTE (H)	PIN-19
18	LINE (H)/TUNER (L)	PIN-18
17	AUDIO	PIN-17
16	TUNER AUDIO R CH	PIN-16
15	GND	PIN-15
14	TUNER AUDIO L CH	PIN-14
13	SW +12V	PIN-13

**P4202 TO MAIN**

30		PIN-30
31	UNSW +14V	PIN-31

**P4703 TO AUDIO/VIDEO JACK**

5	SW +12V	P4501-5
4	AUDIO	P4501-4
3	GND	P4501-3
2	GND	P4501-2
1	VIDEO	P4501-1

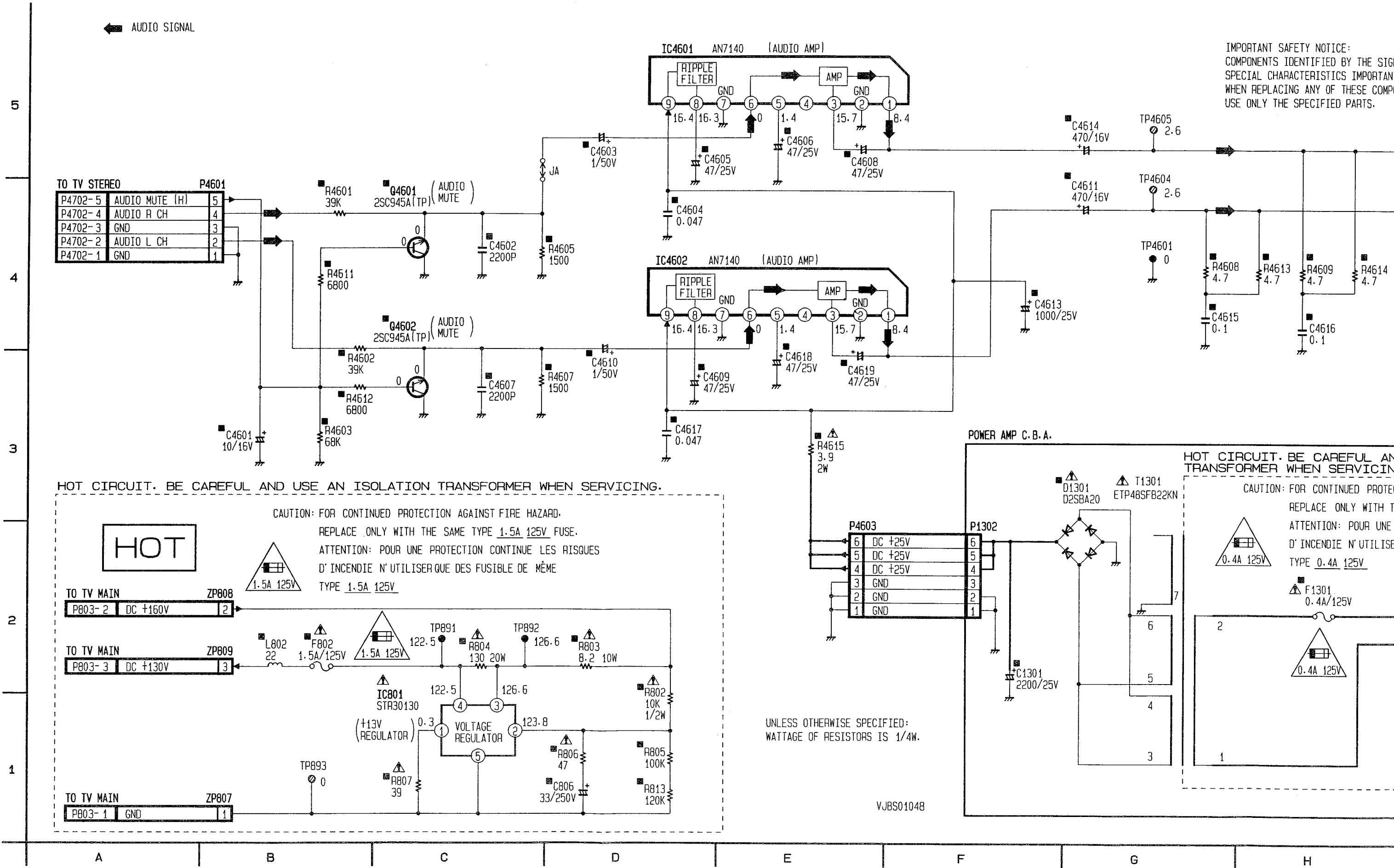
UNLESS OTHERWISE SPECIFIED:  
DIODES IS MA165 AND  
WATTAGE OF RESISTOR IS 1/4W.


**TV STEREO**

TRANSISTOR	
Q4701	B-3
Q4702	A-2
Q4703	C-4
Q4704	F-2
Q4705	F-5
Q4706	J-3
Q4707	I-3
Q4708	I-2
Q4709	J-2
Q4710	I-4
IC	
IC4701	D-3
IC4702	K-4
IC4703	M-3
CONNECTOR	
P4201	O-3
P4202	O-2
P4501	O-4
P4702	O-5
P4703	O-2
TEST POINT	
TP4701	H-2
TP4702	G-5
TP4703	G-3

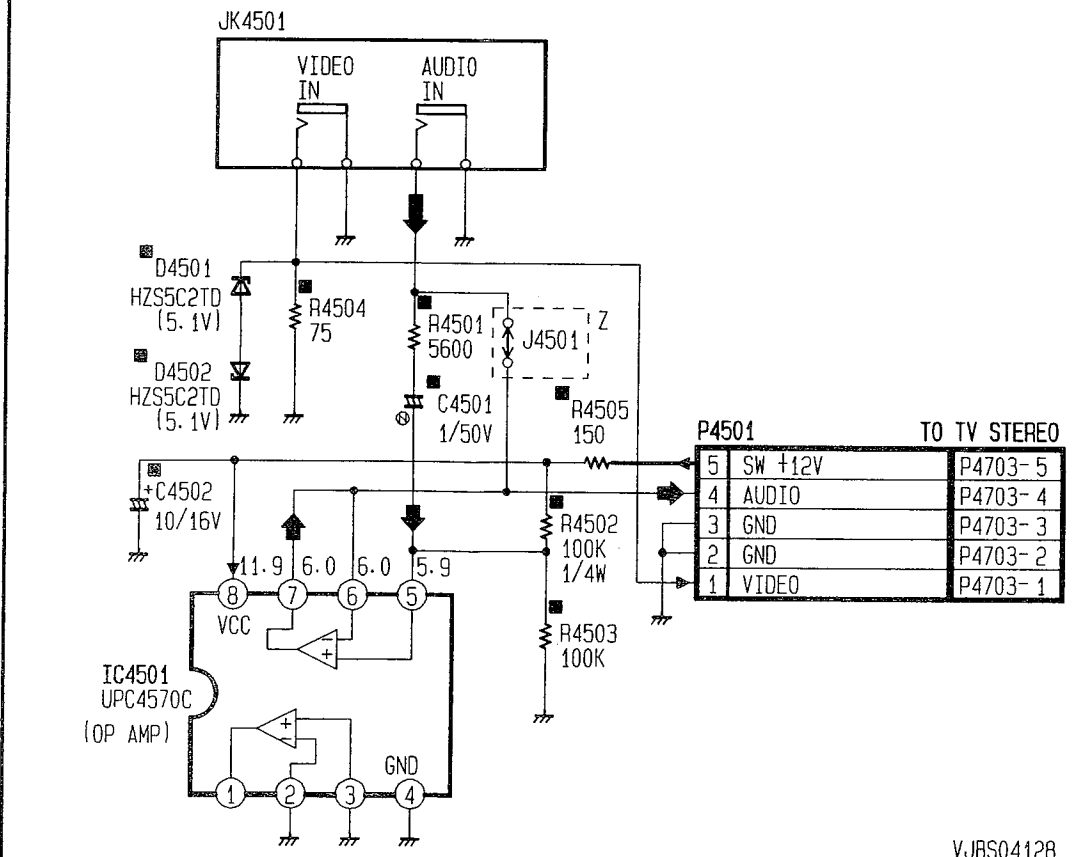
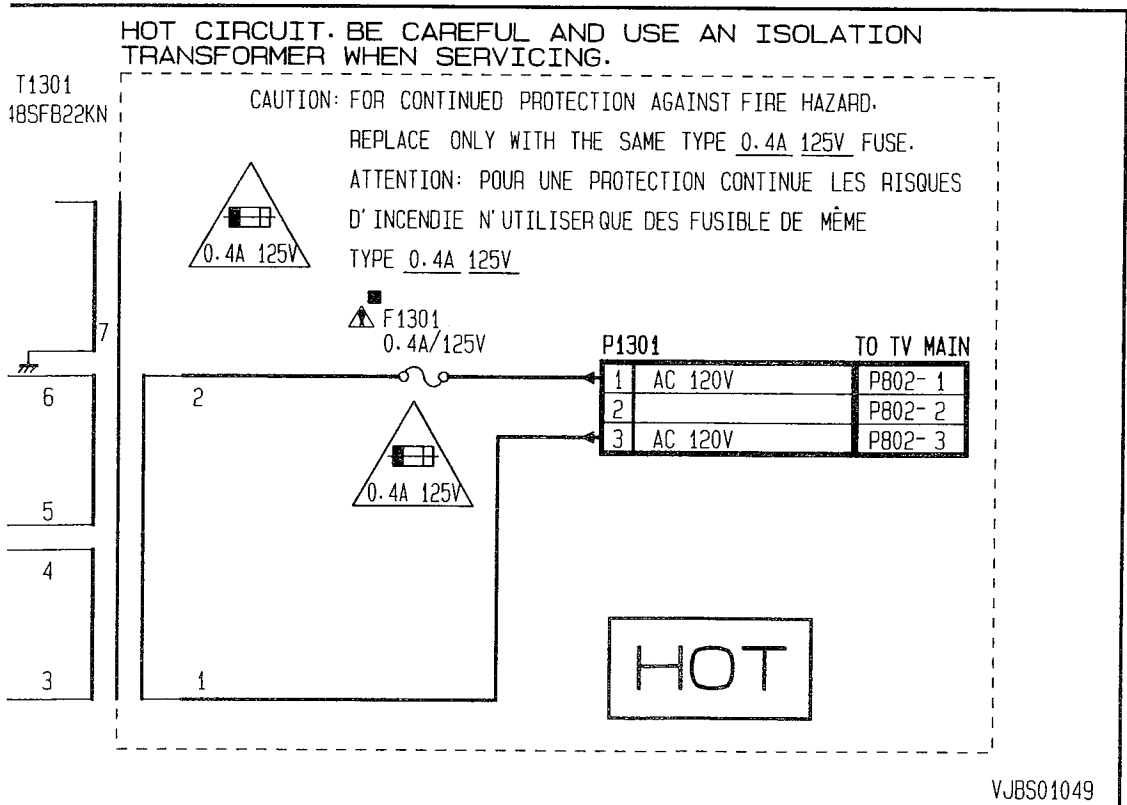
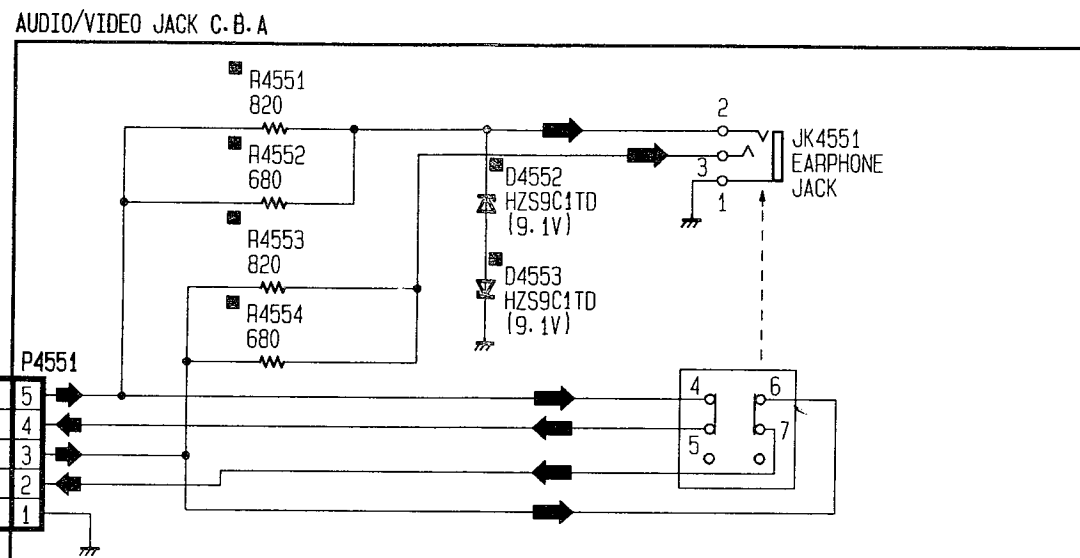
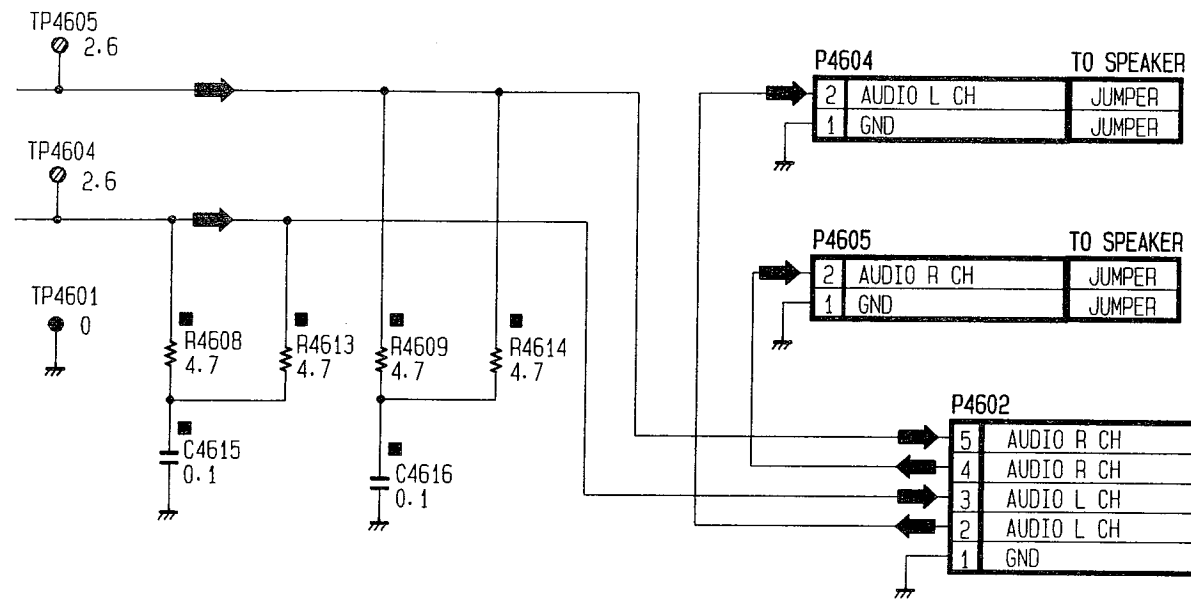
VJBS4009

# STEREO AMP / TV AVR / POWER AMP / A/V JACK SCHEMATIC DIAGRAM (L)



IMPORTANT SAFETY NOTICE:  
COMPONENTS IDENTIFIED BY THE SIGN  HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SPECIFIED PARTS.

NOTE:  
FOR SCHEMATIC AND C.B.A. DIAGRAM NOTES, REFER TO BEGINNING OF SCHEMATIC SECTION (SECTION III).



COMPARISON CHART OF MODELS & MARKS

MODEL	MARK
PV-M1326	A
PV-M1326W	B
VV1306	C
VV1306B	D
VV1316W	E
PV-M1346	F
PV-M1356W	G
PV-M2036	H
VV2006	I
VV2016W	J
PV-M2046	K
VV2706	L
NOT USED	Z

STEREO AMP/TV AVR

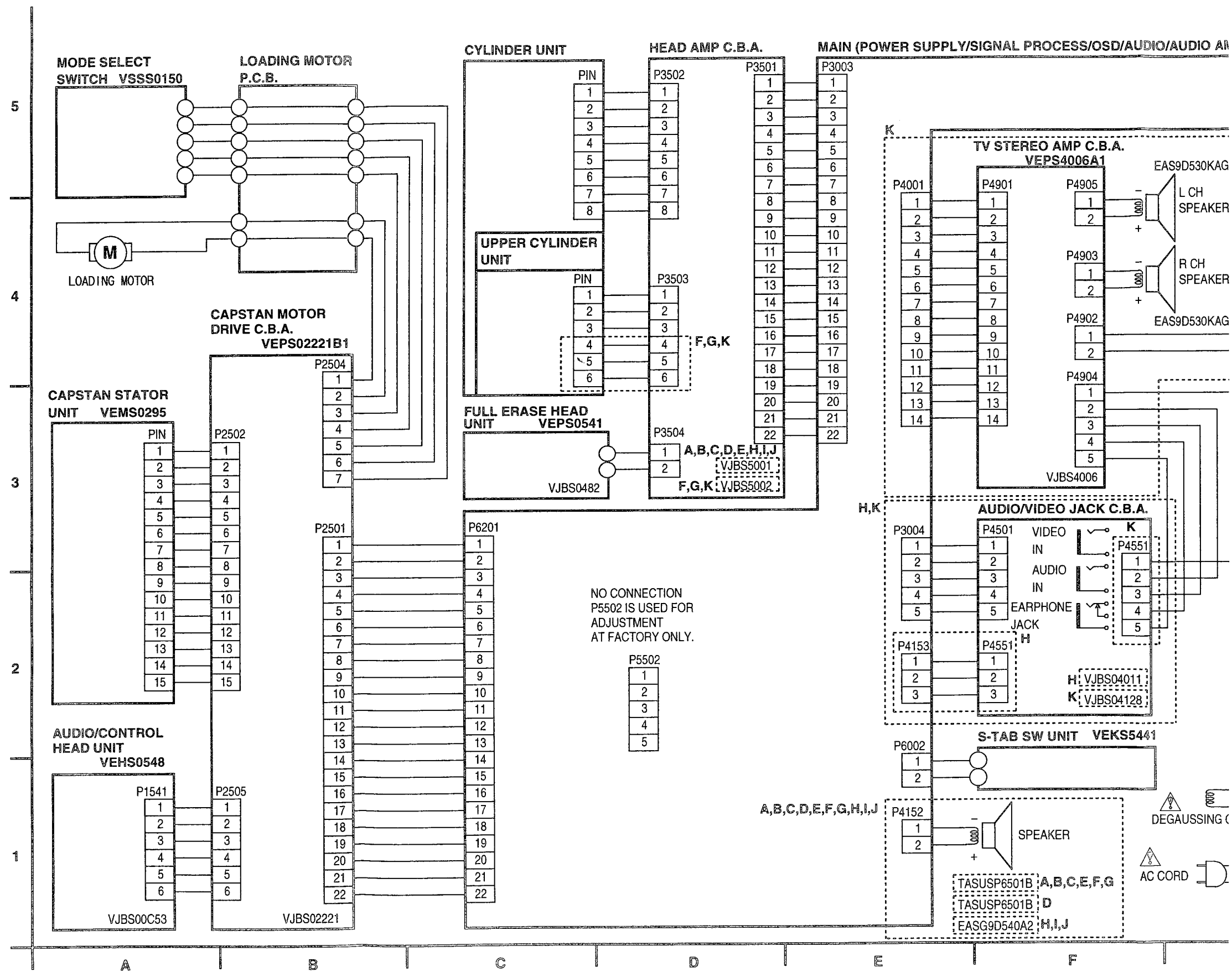
TRANSISTOR	
Q4601	C-4
Q4602	C-4
IC	
IC4601	D-5
IC4602	D-4
IC801	C-1
CONNECTOR	
P4601	B-4
P4602	H-5
P4603	E-2
P4604	H-4
P4605	H-4
ZP807	A-1
ZP808	A-2
ZP809	A-2
TEST POINT	
TP4601	F-4
TP4604	F-4
TP4605	F-5
TP891	C-2
TP892	C-2
TP893	B-1

TV MAIN	
TRANSISTOR	
Q501	I-1
Q502	C-2
Q521	H-5
Q522	H-5
Q523	I-5
Q551	J-1
Q801	K-2
IC	
IC201	C-1
IC451	E-3
IC801	L-2
CONNECTOR	
A1	L-5
A2	L-5
A3	L-5
A4	L-5
A5	L-5
A6	L-5
A8	L-5
A10	L-4
A11	L-5
P201	A-5
P202	A-4
P203	A-3
P204	A-5
P801	P-2
TEST POINT	
TP6	I-3
TP551	J-3
TP552	J-3
TP553	H-4
TP554	H-4
TP556	J-5
TP557	J-5
TP891	L-2
TP892	L-2
TP893	L-1
ADJUSTMENT	
R452	F-1
R532	F-4
CRT	
TRANSISTOR	
Q351	N-5
Q352	N-5
Q353	N-4
CONNECTOR	
C1	L-5
C2	L-5
C3	L-5
C4	L-5
C5	L-5
C6	L-5
C8	L-5
C10	L-5
C11	L-5
P353	O-4
P354	O-5
P355	O-5
TEST POINT	
TP47E	L-4
TP48	L-5
TP50	N-5
ADJUSTMENT	
R363	M-5
R365	M-3
R369	N-5
R370	N-4
R371	N-4


# INTERCONNECTION SCHEMATIC DIAGRAM (A,B,C,D,E,F,G,H,I,J,K)

TV MAIN	
TRANSISTOR	
Q501	I-1
Q502	C-2
Q521	H-5
Q522	H-5
Q523	I-5
Q551	J-1
Q801	K-1
IC	
IC451	E-3
CONNECTOR	
A1	L-5
A2	L-5
A3	L-5
A4	L-5
A5	L-5
A6	L-5
A8	L-5
A11	L-5
P201	A-5
P202	A-4
P203	A-3
P204	A-5
P801	P-2
P802	P-2
P803	P-1
TEST POINT	
TP6	I-3
TP551	J-3
TP552	J-3
TP553	H-4
TP556	J-5
TP557	J-5
ADJUSTMENT	
R452	F-1
R532	F-4

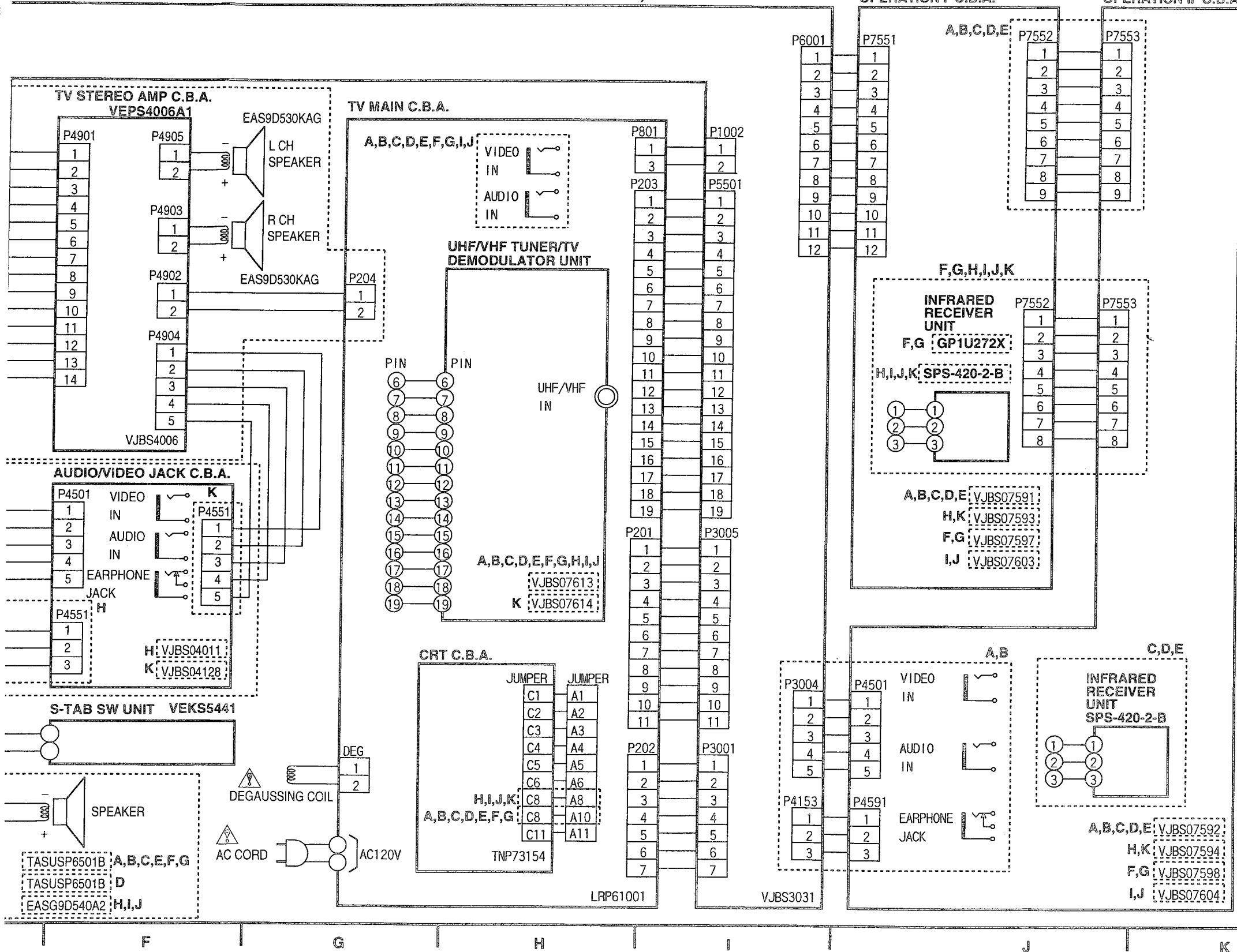
CRT	
TRANSISTOR	
Q351	N-5
Q352	N-5
Q353	N-4
CONNECTOR	
C1	L-5
C2	L-5
C3	L-5
C4	L-5
C5	L-5
C6	L-5
C8	L-5
C10	L-5
C11	L-5
P353	O-4
P354	O-5
TEST POINT	
TP47E	L-4
TP48	L-5
TP50	N-5
ADJUSTMENT	
R363	M-5
R365	M-4
R369	N-5
R370	N-4
R371	N-4



NOTE:  
FOR SCHEMATIC AND C.B.A. DIAGRAM NOTES,  
REFER TO BEGINNING OF SCHEMATIC SECTION (SECTION III).

IMPORTANT SAFETY NOTICE:  
COMPONENTS IDENTIFIED BY THE SIGN  HAVE  
SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY.  
WHEN REPLACING ANY OF THESE COMPONENTS,  
USE ONLY THE SPECIFIED PARTS.

PPLY/SIGNAL PROCESS/OSD/AUDIO/AUDIO AMP/TV Y/C PROCESS/SYSTEM CONTROL/SERVO) C.B.A.



C B A /UNIT NUMBER CHART

MAIN C.B.A.	
C.B.A. NUMBER	MODEL NUMBER MARK
VEPS3031B1	A, B
VEPS3031C1	C, D, E
VEPS3031A1	F, G
VEPS3031F1	H
VEPS3031G1	I, J
VEPS3031D1	K

OPERATION I C.B.A.	
C.B.A. NUMBER	MODEL NUMBER MARK
VEPS07591A1	A, B, C, D, E
VEPS07597A1	F, G
VEPS07593A1	H, K
VEPS07603A1	I, J

OPERATION II C.B.A.	
C.B.A. NUMBER	MODEL NUMBER MARK
VEPS07592C1	A, B
VEPS07592A1	C, D, E
VEPS07598B1	F, G
VEPS07594A1	H, K
VEPS07604A1	I, J

HEAD AMP C.B.A.	
C.B.A. NUMBER	MODEL NUMBER MARK
VEPS5001CA1	A, B, C, D, E, H, I, J
VEPS5002CA1	F, G, K

AUDIO/VIDEO JACK C.B.A.	
C.B.A. NUMBER	MODEL NUMBER MARK
VEPS4011A1	H
VEPS04128C1	K

UHF/VHF TUNER/TV DEMODULATOR UNIT	
UNIT NUMBER	MODEL NUMBER MARK
VEQS0583	A, B, C, D, E, F, G, H, I, J
VEQS0584	K

COMPARISON CHART OF MODELS & MARKS

MODEL	MARK
PV-M1326	A
PV-M1326W	B
VV1306	C
VV1306B	D
VV1316W	E
PV-M1346	F
PV-M1356W	G
PV-M2036	H
VV2006	I
VV2016W	J
PV-M2046	K
VV2706	L
NOT USED	Z

TV MAIN C.B.A.	
C.B.A. NUMBER	MODEL NUMBER MARK
LRM61001YZ	A
LRM61001YA	B
LRM61001ZZ	C, F
LRM61001XZ	D
LRM61001XA	E
LRM61001ZA	G
LRM61001BZ	H
LRM61001GZ	I
LRM61001GA	J
LRM61001AZ	K

CRT C.B.A.	
C.B.A. NUMBER	MODEL NUMBER MARK
TNP73154EE	A, B, C, D, E, F, G
TNP73154FF	H, I, J, K

CYLINDER UNIT	
UNIT NUMBER	MODEL NUMBER MARK
VEGS0385	A, B, C, D, E, H, I, J
VEGS0387	F, G, K

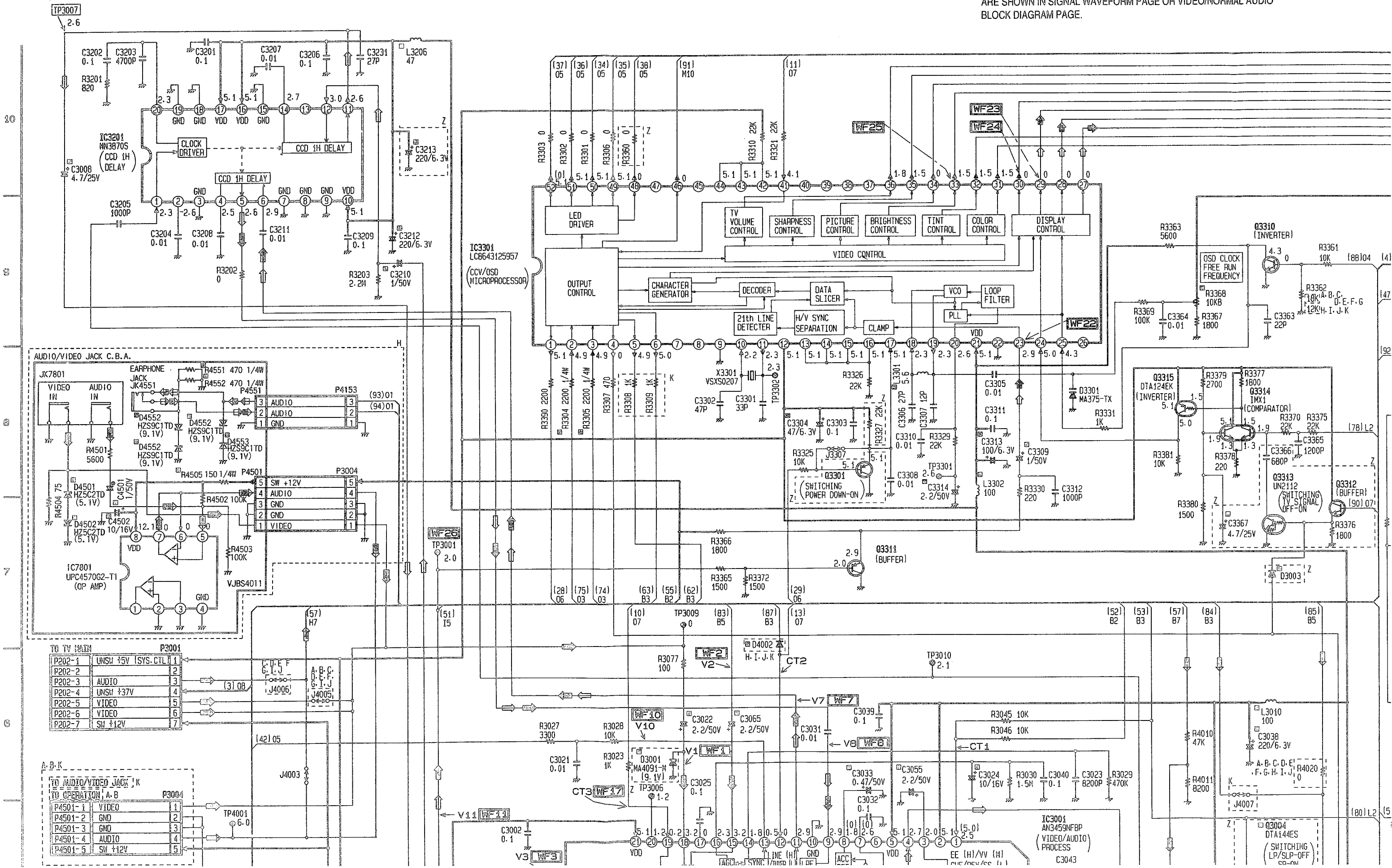
UPPER CYLINDER UNIT	
UNIT NUMBER	MODEL NUMBER MARK
VEHS0553	A, B, C, D, E, H, I, J
VEHS0554	F, G, K

# MAIN II (SIGNAL PROCESS/OSD/AUDIO/AUDIO AMP/TV Y/C PROCESS) / A/V JACK SCHEM

← REC VIDEO SIGNAL   
 ← PB VIDEO SIGNAL   
 ← REC AUDIO SIGNAL   
 ← PB AUDIO SIGNAL   
 ← CYLINDER SERVO


NOTE:

SIGNAL WAVEFORM OF POINTS WITH MARKS "V1,....,AU1,....,CT1,...."  
 ARE SHOWN IN SIGNAL WAVEFORM PAGE OR VIDEO/NORMAL AUDIO  
 BLOCK DIAGRAM PAGE.

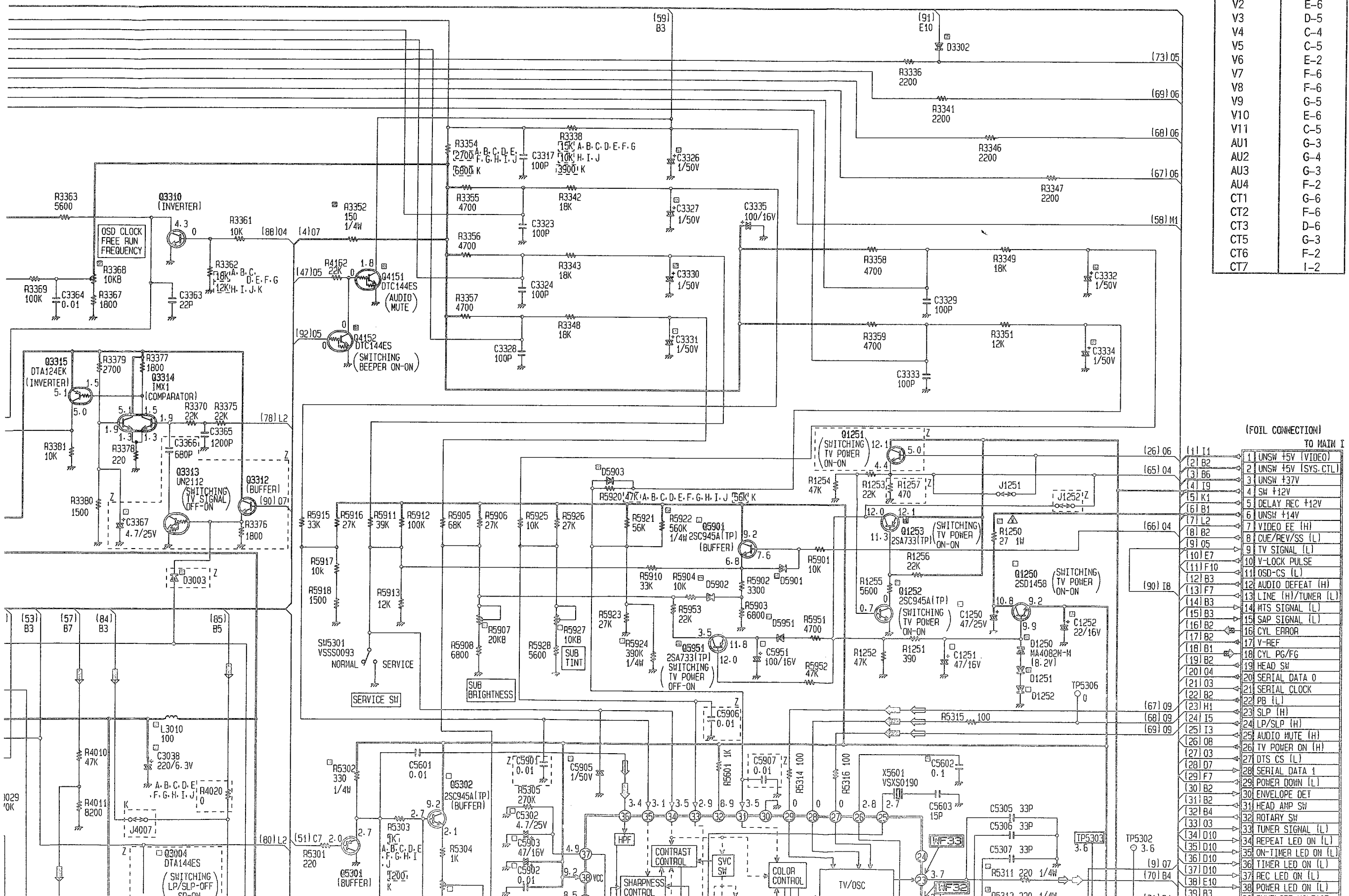


# A/V JACK SCHEMATIC DIAGRAM (A, B, C, D, E, F, G, H, I, J, K)

WITH MARKS "V1, ..., AU1, ..., CT1, ..."  
FROM PAGE OR VIDEO/NORMAL AUDIO

IMPORTANT SAFETY NOTICE:  
COMPONENTS IDENTIFIED BY THE SIGN  HAVE  
SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY.  
WHEN REPLACING ANY OF THESE COMPONENTS,  
USE ONLY THE SPECIFIED PARTS.

NOTE:  
FOR SCHEMATIC AND C.B.A. DIAGRAM NOTES,  
REFER TO BEGINNING OF SCHEMATIC SECTION (SECTION III).



SIGNAL CHECK POINT	
V1	E-6
V2	E-6
V3	D-5
V4	C-4
V5	C-5
V6	E-2
V7	F-6
V8	F-6
V9	G-5
V10	E-6
V11	C-5
AU1	G-3
AU2	G-4
AU3	G-3
AU4	F-2
CT1	G-6
CT2	F-6
CT3	D-6
CT5	G-3
CT6	F-2
CT7	I-2

MAIN II	
TRANSISTOR	
Q1250	N-7
Q1251	M-8
Q1252	M-7
Q1253	M-7
Q3002	F-1
Q3004	I-5
Q3301	F-8
Q3310	I-9
Q3311	F-7
Q3312	I-8
Q3313	I-8
Q3314	I-8
Q3315	H-8
Q4001	I-3
Q4002	H-2
Q4003	H-2
Q4101	K-2
Q4151	J-9
Q4152	J-8
Q5301	J-5
Q5302	J-6
Q5901	L-7
Q5951	L-7

IC	
IC3001	G-5
IC3201	A-10
IC3301	C-9
IC4151	M-2
IC5301	K-4

CONNECTOR	
P3001	A-6
P3003	A-2
P3004	A-6
P3005	A-5
P4001	A-4
P4152	O-1
P4153	O-2
P4153	C-8
P5501	O-4
P5502	O-3

TEST POINT	
TP3001	C-7
TP3002	C-2
TP3003	D-3
TP3004	C-4
TP3005	C-4
TP3006	E-6
TP3007	A-10
TP3008	C-4
TP3009	E-7
TP3010	F-6
TP3301	G-8
TP3302	E-8
TP4001	B-5
TP4002	L-1
TP4003	L-2
TP4101	J-2
TP4102	J-2
TP4151	N-1
TP4152	N-1
TP4153	O-4
TP5301	N-5
TP5302	N-5
TP5303	N-5
TP5306	N-6

ADJUSTMENT

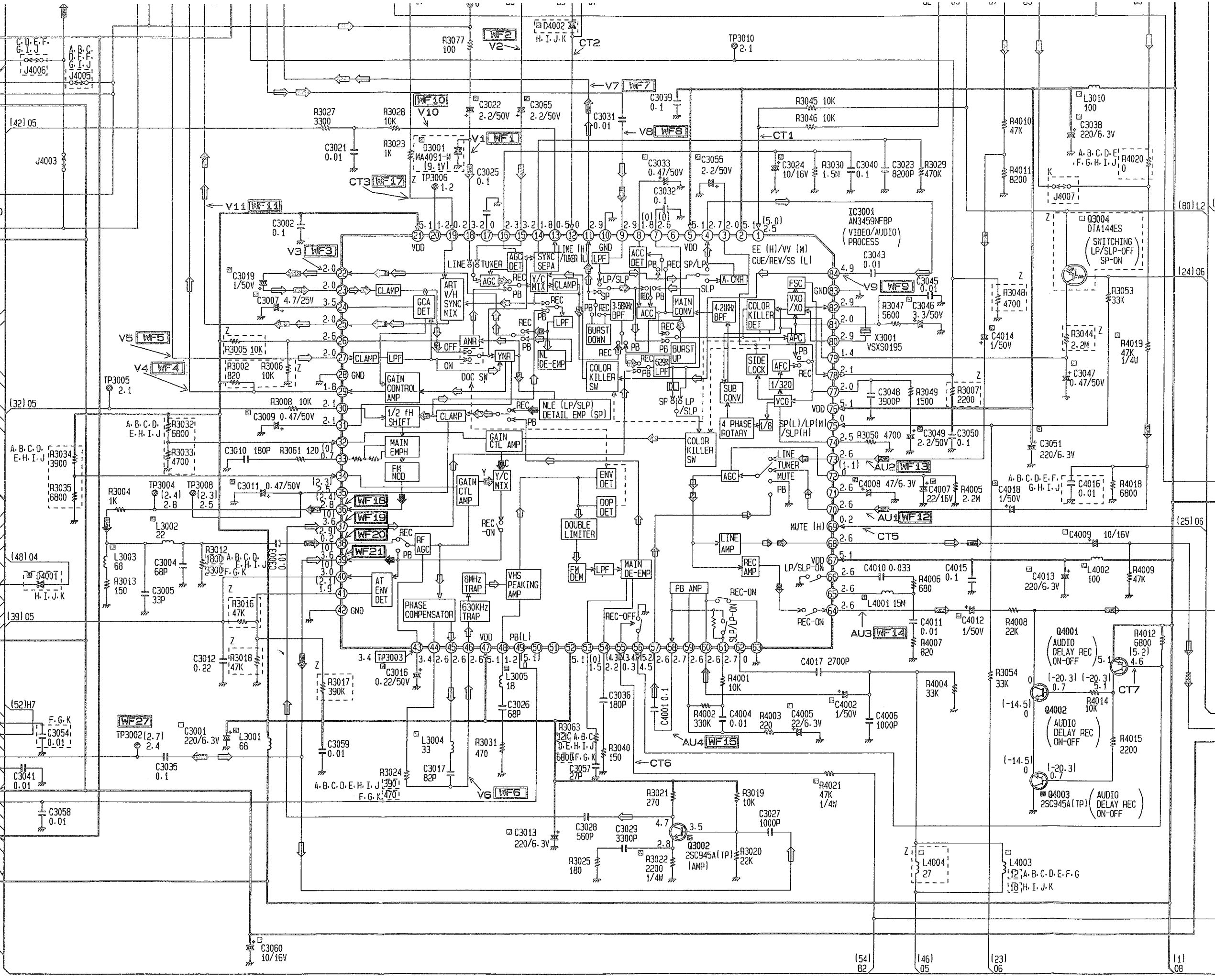
TO TV MAIN P3001		
P202-1	UNSW +5V (SYS. CTL)	1
P202-2		2
P202-3	AUDIO	3
P202-4	UNSW +37V	4
P202-5	VIDEO	5
P202-6	VIDEO	6
P202-7	SH +12V	7

TO AUDIO/VIDEO JACK K TO OPERATION A-B P3004		
P4501-1	VIDEO	1
P4501-2	GND	2
P4501-3	GND	3
P4501-4	AUDIO	4
P4501-5	SH +12V	5

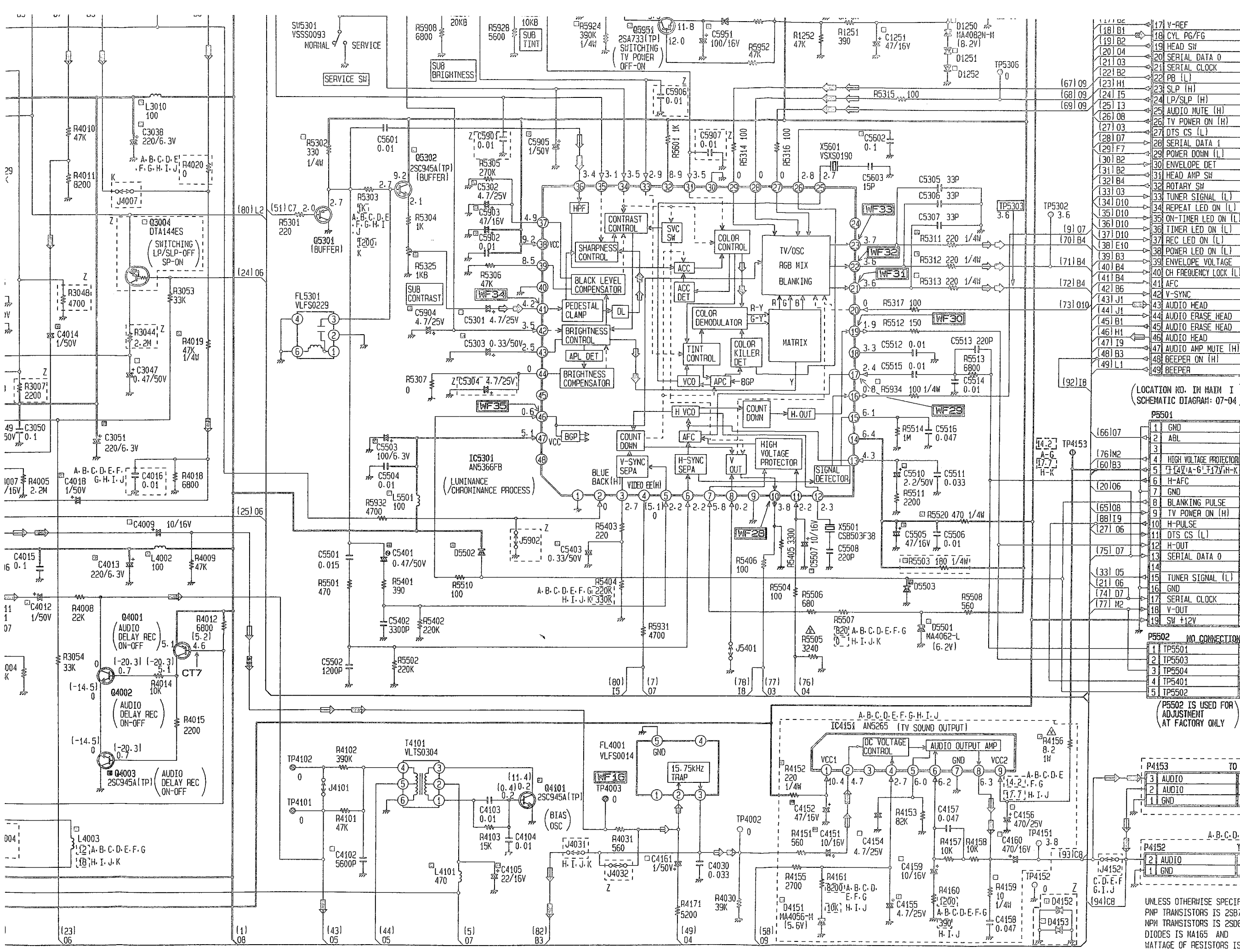
TO TV MAIN P3005		
P201-11	TUNER VIDEO	11
P201-10	TUNER AUDIO	10
P201-9	GND	9
P201-8	GND	8
P201-7	GND	7
P201-6	AFC	6
P201-5	CH FREQUENCY LOCK (L)	5
P201-4	GND	4
P201-3	BLUE	3
P201-2	GREEN	2
P201-1	RED	1

TO TV STEREO AMP P4001		
P4901-1	+17V	1
P4901-2	GND	2
P4901-3	RF AUDIO	3
P4901-4	MTS SIGNAL (L)	4
P4901-5	SAP SIGNAL (L)	5
P4901-6	VIDEO EE (H)	6
P4901-7	NORMAL AUDIO	7
P4901-8	GND	8
P4901-9	LINE (H)/TUNER (L)	9
P4901-10	AUDIO DEFEAT (H)	10
P4901-11	STEREO (H)/MONO (L)	11
P4901-12	MTS (H)/SAP (L)	12
P4901-13	TV VOLUME CONTROL	13
P4901-14	SH +12V	14

TO HEAD AMP P3003		
P3501-19	ENVELOPE DET	19
P3501-18	HEAD AMP SH	18
P3501-14	CUE/REV/SS (L)	14
P3501-13	DELAY REC +12V	13
P3501-16	REC/PB VIDEO	16
P3501-20	HEAD SH	20
P3501-12	GND	12
P3501-15	SH +12V	15
P3501-17	PB (L)	17
P3501-5	V-REF	5
P3501-3	CYL ERROR	3
P3501-6	UNSW +5V (SYS. CTL)	6
P3501-2	CYL PG/FG	2
P3501-1	GND	1
P3501-4	UNSW +14V	4
P3501-7	UNSW +5V (VIDEO)	7
P3501-11		11
P3501-8		8
P3501-9		9
P3501-10		10
P3501-21	GND	21
P3501-22	FULL ERASE HEAD	22







TP3006	E-6
TP3007	A-10
TP3008	C-4
TP3009	E-7
TP3010	F-6
TP3301	G-8
TP3302	E-8
TP4001	B-5
TP4002	L-1
TP4003	L-2
TP4101	J-2
TP4102	J-2
TP4151	N-1
TP4152	N-1
TP4153	O-4
TP5302	N-5
TP5303	N-5
TP5306	N-6
ADJUSTMENT	
R3368	H-9
R5325	J-5
R5907	K-7
R5927	K-7

(LOCATION NO. IN MAIN I SCHEMATIC DIAGRAM: 07-04)

COMPARISON CHART OF MODELS & MARKS	
MODEL	MARK
PV-M1326	A
PV-M1326W	B
VV1306	C
VV1306B	D
VV1316W	E
PV-M1346	F
PV-M1356W	G
PV-M2036	H
VV2006	I
VV2016W	J
PV-M2046	K
VV2706	L
NOT USED	Z

P5501 TO TV MAIN	
1 GND	P203-1
2 ABL	P203-2
3	P203-3
4 HIGH VOLTAGE PROTECTOR	P203-4
5 H-V/A-6' F17VH-K	P203-5
6 H-AFC	P203-6
7 GND	P203-7
8 BLANKING PULSE	P203-8
9 TV POWER ON (H)	P203-9
10 H-PULSE	P203-10
11 DTS CS (L)	P203-11
12 H-OUT	P203-12
13 SERIAL DATA 0	P203-13
14	P203-14
15 TUNER SIGNAL (L)	P203-15
16 GND	P203-16
17 SERIAL CLOCK	P203-17
18 V-OUT	P203-18
19 SW +12V	P203-19

(P5502 IS USED FOR ADJUSTMENT AT FACTORY ONLY)

P5502 NO CONNECTION	
1 TP5501	
2 TP5503	
3 TP5504	
4 TP5401	
5 TP5502	

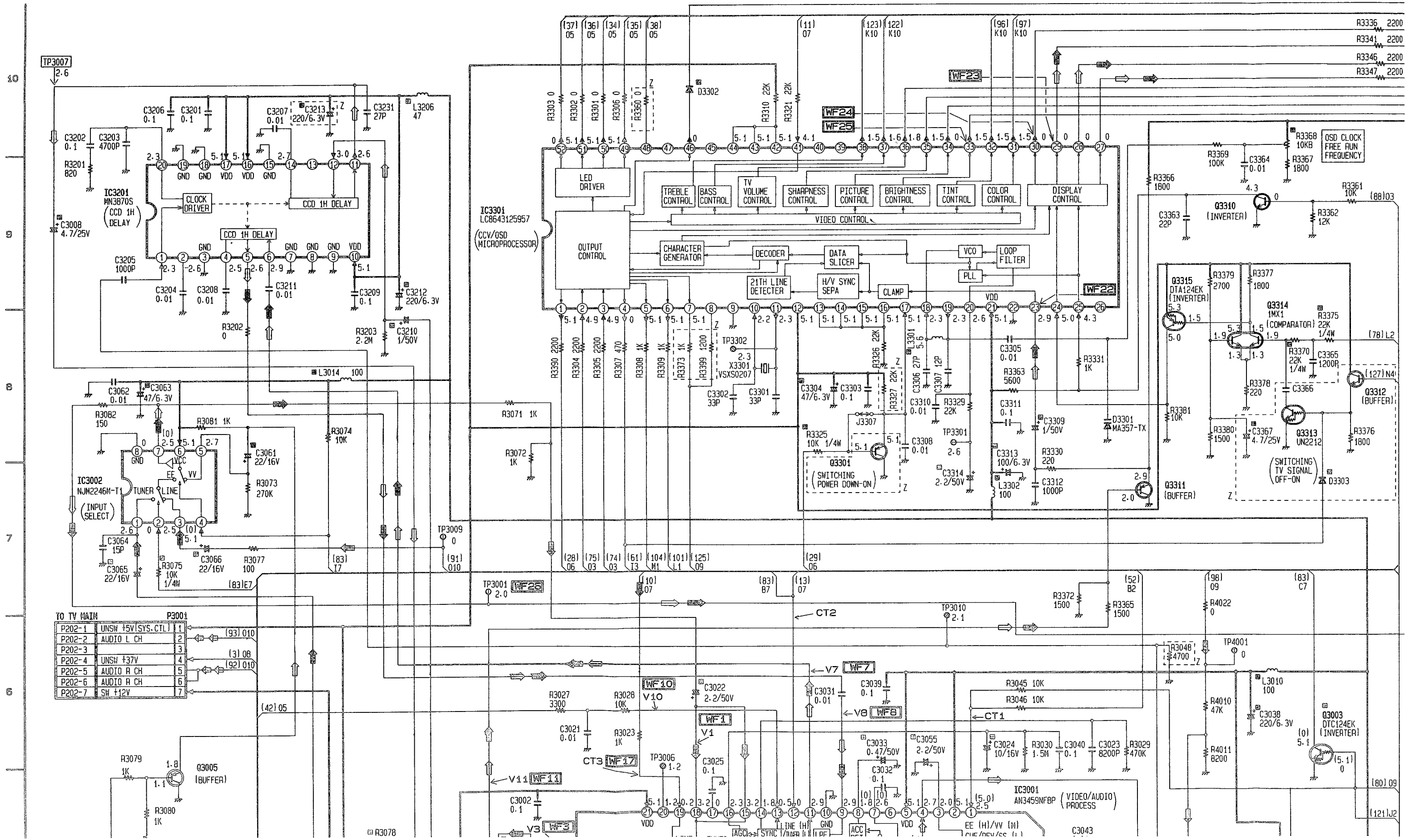
UNLESS OTHERWISE SPECIFIED:  
PNP TRANSISTORS IS 2SB709(R).  
NPN TRANSISTORS IS 2SD601(R).  
DIODES IS MA165 AND  
WATTAGE OF RESISTORS IS 1/10W

# MAIN II (SIGNAL PROCESS/OSD/AUDIO/TV Y/C PROCESS) SCHEMATIC DIAGRAM (L)

REC VIDEO SIGNAL  
  PB VIDEO SIGNAL  
  REC AUDIO SIGNAL  
  PB AUDIO SIGNAL  
  CYLINDER SERVO


NOTE:

SIGNAL WAVEFORM OF POINTS WITH MARKS "V1.....AU1.....CT1,..." ARE SHOWN IN SIGNAL WAVEFORM PAGE OR VIDEO/NORMAL AUDIO BLOCK DIAGRAM PAGE.

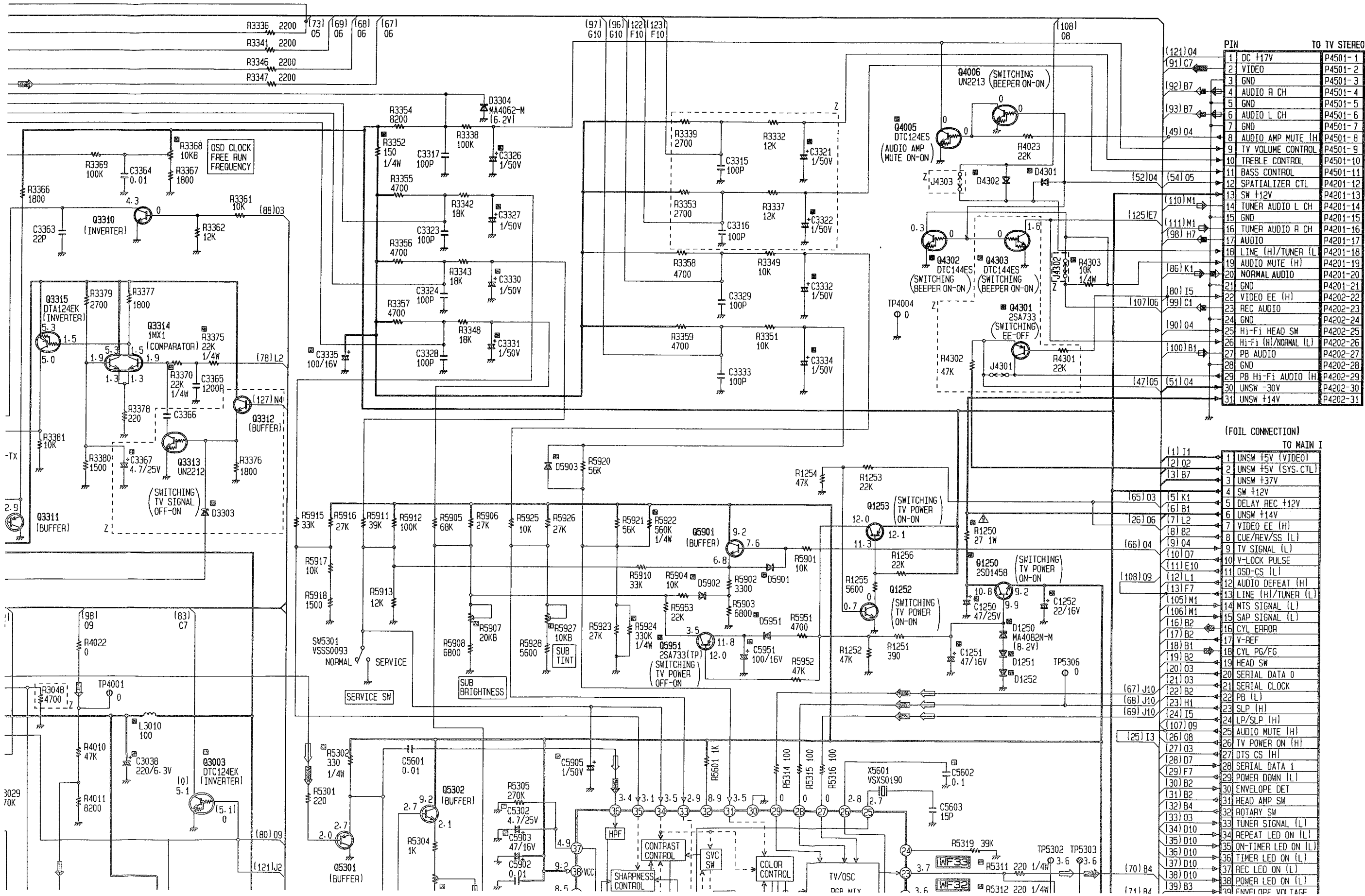


# DIAGRAM (L)

TH MARKS "V1,....,AU1,....,CT1,...."  
PAGE OR VIDEO/NORMAL AUDIO

**IMPORTANT SAFETY NOTICE:**  
COMPONENTS IDENTIFIED BY THE SIGN  HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SPECIFIED PARTS.

**NOTE:**  
FOR SCHEMATIC AND C.B.A. DIAGRAM NOTES, REFER TO BEGINNING OF SCHEMATIC SECTION (SECTION III).



SIGNAL CHECK POINT	
V1	E-6
V3	D-5
V4	C-4
V5	C-5
V6	E-2
V7	F-6
V8	F-6
V9	G-5
V10	E-6
V11	D-5
AU1	G-3
AU2	G-4
AU3	G-3
AU4	F-2
CT1	G-6
CT2	F-6
CT3	D-6
CT4	E-2
CT5	G-3
CT6	F-2
CT7	I-2

MAIN II	
TRANSISTOR	
Q1250	N-7
Q1252	M-7
Q1253	M-7
Q3002	F-1
Q3003	I-6
Q3005	B-6
Q3301	F-7
Q3310	H-9
Q3311	H-7
Q3312	I-8
Q3313	I-8
Q3314	H-8
Q3315	H-9
Q4001	I-3
Q4002	I-2
Q4003	I-2
Q4005	M-10
Q4006	M-10
Q4101	K-2
Q4301	N-9
Q4302	M-9
Q4303	N-9
Q5301	J-5
Q5302	J-6
Q5901	L-7
Q5951	L-7

IC	
IC3001	G-5
IC3002	A-7
IC3201	A-9
IC3301	D-9
IC5301	K-4
IC9001	L-2

CONNECTOR	
P3001	A-6
P3003	A-2
P3005	A-5
P4001	A-3
P5001	A-4

PIN	TO TV STEREO
1	DC +17V P4501-1
2	VIDEO P4501-2
3	GND P4501-3
4	AUDIO R CH P4501-4
5	GND P4501-5
6	AUDIO L CH P4501-6
7	GND P4501-7
8	AUDIO AMP MUTE (H) P4501-8
9	TV VOLUME CONTROL P4501-9
10	TREBLE CONTROL P4501-10
11	BASS CONTROL P4501-11
12	SPATIALIZER CTL P4201-12
13	SW +12V P4201-13
14	TUNER AUDIO L CH P4201-14
15	GND P4201-15
16	TUNER AUDIO R CH P4201-16
17	AUDIO P4201-17
18	LINE (H)/TUNER (L) P4201-18
19	AUDIO MUTE (H) P4201-19
20	NORMAL AUDIO P4201-20
21	GND P4201-21
22	VIDEO EE (H) P4202-22
23	REC AUDIO P4202-23
24	GND P4202-24
25	Hi-Fi HEAD SW P4202-25
26	Hi-Fi (H)/NORMAL (L) P4202-26
27	PB AUDIO P4202-27
28	GND P4202-28
29	PB Hi-Fi AUDIO (H) P4202-29
30	UNSW -30V P4202-30
31	UNSW +14V P4202-31

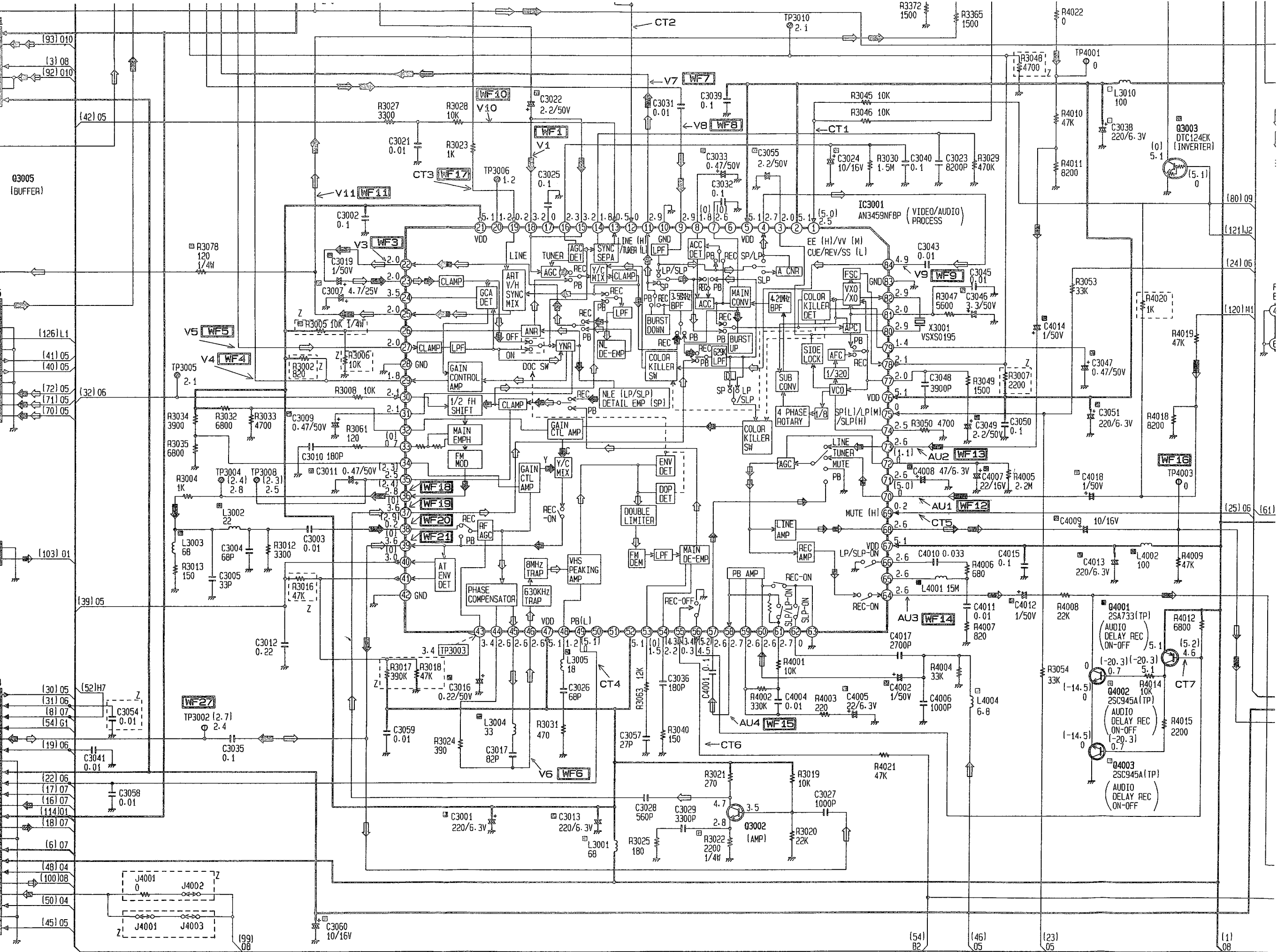
(FOIL CONNECTION)	TO MAIN I
(1) I1	1 UNSW +5V (VIDEO)
(2) O2	2 UNSW +5V (SYS. CTL)
(3) B7	3 UNSW +37V
(4) K1	4 SW +12V
(5) B1	5 DELAY REC +12V
(6) L2	6 UNSW +14V
(7) B2	7 VIDEO EE (H)
(8) B2	8 CUE/REV/SS (L)
(9) O4	9 TV SIGNAL (L)
(10) O7	10 V-LOCK PULSE
(11) E10	11 OSD-CS (L)
(12) L1	12 AUDIO DEFEAT (H)
(13) F7	13 LINE (H)/TUNER (L)
(105) M1	14 MTS SIGNAL (L)
(106) M1	15 SAP SIGNAL (L)
(16) B2	16 CYL ERROR
(17) B2	17 V-REF
(18) B1	18 CYL PG/FG
(19) B2	19 HEAD SW
(20) O3	20 SERIAL DATA 0
(21) O3	21 SERIAL CLOCK
(22) B2	22 PB (L)
(23) H1	23 SLP (H)
(24) I5	24 LP/SLP (H)
(107) O9	25 AUDIO MUTE (H)
(26) O8	26 TV POWER ON (H)
(27) O3	27 DTS CS (H)
(28) O7	28 SERIAL DATA 1
(29) F7	29 POWER DOWN (L)
(30) B2	30 ENVELOPE DET
(31) B2	31 HEAD AMP SW
(32) B4	32 ROTARY SW
(33) O3	33 TUNER SIGNAL (L)
(34) D10	34 REPEAT LED ON (L)
(35) D10	35 ON-TIMER LED ON (L)
(36) D10	36 TIMER LED ON (L)
(37) D10	37 REC LED ON (L)
(38) D10	38 POWER LED ON (L)
(39) B3	39 FNVFI DPE VDI TARG

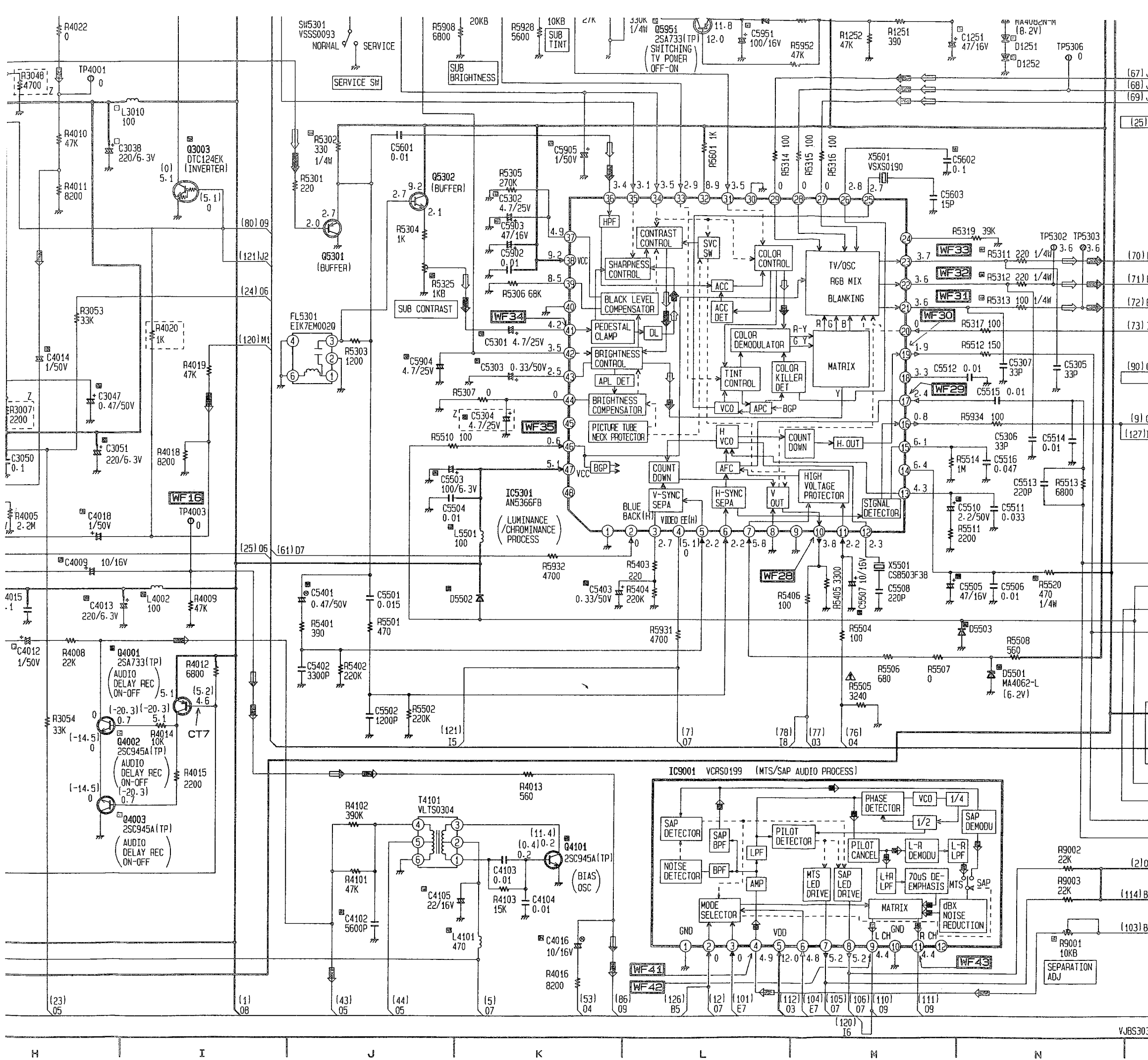
TO TV MAIN		P3001
P202-1	UNSW +5V(SYS.CTL)	1
P202-2	AUDIO L CH	2
P202-3		3
P202-4	UNSW +37V	4
P202-5	AUDIO R CH	5
P202-6	AUDIO R CH	6
P202-7	SW +12V	7

TO TV MAIN		P3005
P201-11	TUNER VIDEO	11
P201-10		10
P201-9	GND	9
P201-8	AUDIO DEFEAT (H)	8
P201-7	GND	7
P201-6	AFC	6
P201-5	CH FREQUENCY LOCK (L)	5
P201-4	GND	4
P201-3	BLUE	3
P201-2	GREEN	2
P201-1	RED	1

TO TV MAIN		P4001
P204-1	GND	1
P204-2	TUNER AUDIO	2

TO HEAD AMP		P3003
P3501-19	ENVELOPE DET	19
P3501-18	HEAD AMP SW	18
P3501-14	CUE/REV/SS (L)	14
P3501-13	DELAY REC +12V	13
P3501-16	REC/PB VIDEO	16
P3501-20	HEAD SW	20
P3501-12	GND	12
P3501-15	SW +12V	15
P3501-17	PB (L)	17
P3501-5	V-REF	5
P3501-3	CYL ERROR	3
P3501-6	UNSW +5V (SYS.CTL)	6
P3501-2	CYL PG/FG	2
P3501-1	GND	1
P3501-4	UNSW +14V	4
P3501-7	UNSW +5V (VIDEO)	7
P3501-11	Hi-Fi HEAD SW	11
P3501-8	PB AUDIO	8
P3501-9	REC AUDIO	9
P3501-10	Hi-Fi DELAY REC (H)	10
P3501-21	GND	21
P3501-22	FULL ERASE HEAD	22





(18) B1	17 V-REF
(19) B2	18 CYL PG/FG
(20) 03	19 HEAD SW
(21) 03	20 SERIAL DATA 0
(22) B2	21 SERIAL CLOCK
(23) H1	22 PB (L)
(24) I5	23 SLP (H)
(107) 09	24 LP/SLP (H)
(26) 08	25 AUDIO MUTE (H)
(27) 03	26 TV POWER ON (H)
(28) 07	27 DTS CS (H)
(29) F7	28 SERIAL DATA 1
(30) B2	29 POWER DOWN (L)
(31) B2	30 ENVELOPE DET
(32) B4	31 HEAD AMP SW
(33) 03	32 ROTARY SW
(34) D10	33 TUNER SIGNAL (L)
(35) D10	34 REPEAT LED ON (L)
(36) D10	35 ON-TIMER LED ON (L)
(37) D10	36 TIMER LED ON (L)
(38) D10	37 REC LED ON (L)
(39) B3	38 POWER LED ON (L)
(40) B4	39 ENVELOPE VOLTAGE
(41) B4	40 CH FREQUENCY LOCK (L)
(42) B6	41 AFC
(43) J1	42 V-SYNC
(44) J1	43 AUDIO HEAD
(45) B1	44 AUDIO ERASE HEAD
(46) H1	45 AUDIO ERASE HEAD
(47) 09	46 AUDIO HEAD
(48) B1	47 PB Hi-Fi AUDIO (H)
(49) 09	48 Hi-Fi HEAD SW
(50) B1	49 AUDIO AMP MUTE (H)
(51) 08	50 Hi-Fi DELAY REC (H)
(52) 09	51 UNSW -30V
(53) K1	52 BEEPER ON (H)
(54) 09	53 BEEPER
	54 SPATIALIZER

(LOCATION NO. IN MAIN I SCHEMATIC DIAGRAM: 04-08)

P5501 TO TV MAIN	
1	GND P203-1
2	ABL P203-2
3	HIGH VOLTAGE PROTECTOR P203-3
4	DC +17V P203-4
5	H-AFC P203-5
6	GND P203-6
7	BLANKING PULSE P203-7
8	TV POWER ON (H) P203-8
9	H-PULSE P203-9
10	H-SYNC (H) P203-10
11	H-OUT P203-11
12	SERIAL DATA 0 P203-12
13	SERIAL CLOCK P203-13
14	V-TUNER SIGNAL (L) P203-14
15	GND P203-15
16	GND P203-16
17	SERIAL CLOCK P203-17
18	V-OUT P203-18
19	SW +12V P203-19

- TP5504 3.8
- TP5502 0.6
- TP5401 0
- TP5503 2.2
- TP5501 1.0


UNLESS OTHERWISE SPECIFIED:  
PNP TRANSISTORS IS 2SB709(R).  
NPN TRANSISTORS IS 2SD601(R).  
DIODES IS MA165 AND  
WATTAGE OF RESISTORS IS 1/10W

Q4301	N-9
Q4302	M-9
Q4303	N-9
Q5301	J-5
Q5302	J-6
Q5901	L-7
Q5951	L-7
IC	
IC3001	G-5
IC3002	A-7
IC3201	A-9
IC3301	D-9
IC5301	K-4
IC9001	L-2
CONNECTOR	
P3001	A-6
P3003	A-2
P3005	A-5
P4001	A-3
P5501	O-4
ADJUSTMENT	
R3368	I-10
R5325	J-5
R5907	K-7
R5927	K-7
R9001	N-1
TEST POINT	
TP3001	D-7
TP3002	C-2
TP3003	D-3
TP3004	C-4
TP3005	C-4
TP3006	E-6
TP3007	A-10
TP3008	C-4
TP3009	C-7
TP3010	F-7
TP3301	G-8
TP3302	E-8
TP4001	H-6
TP4003	I-4
TP4004	M-9
TP5302	N-5
TP5303	N-5
TP5306	N-6
TP5401	O-2
TP5501	O-2
TP5502	O-2
TP5503	O-2
TP5504	O-2

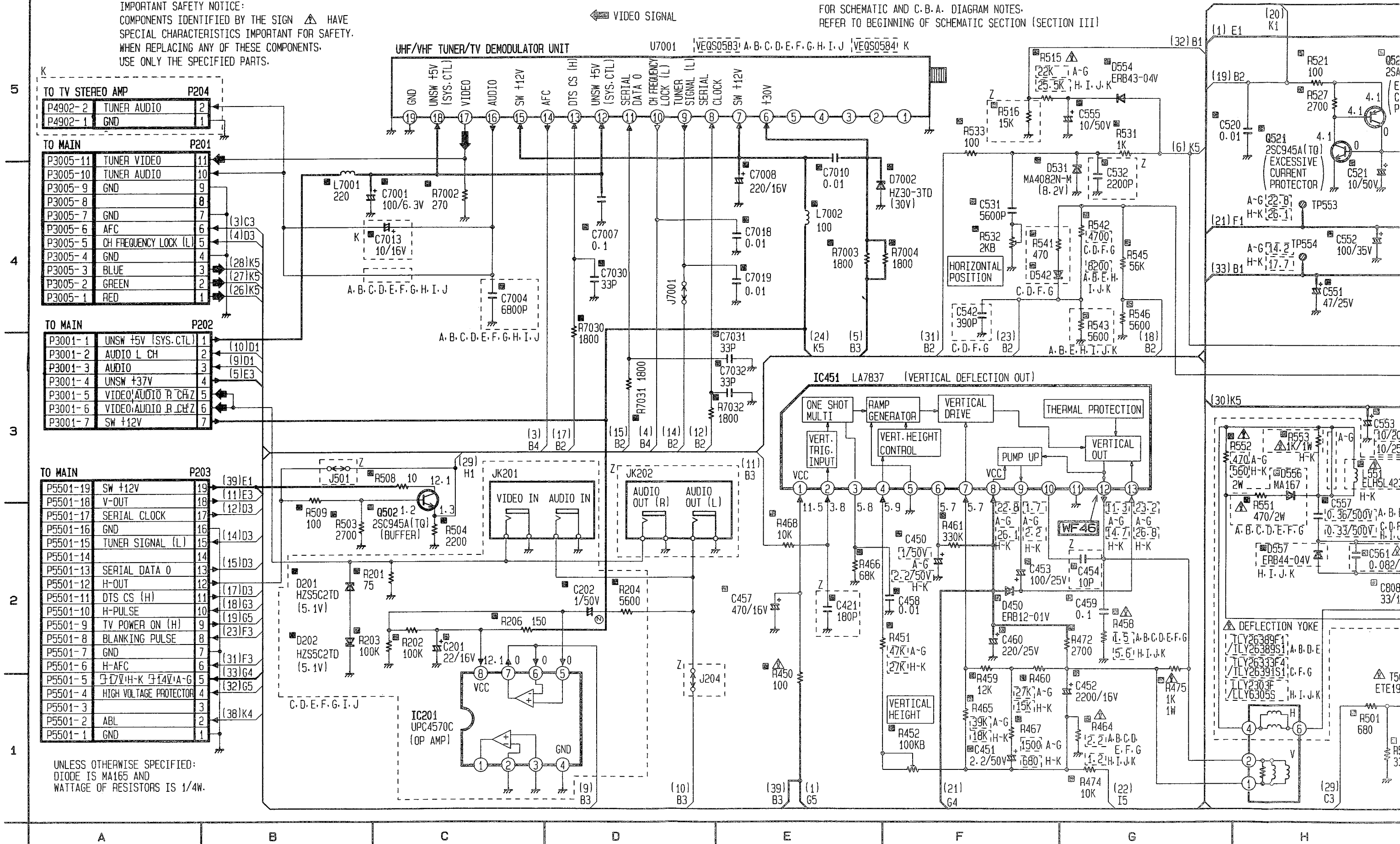
COMPARISON CHART OF MODELS & MARKS

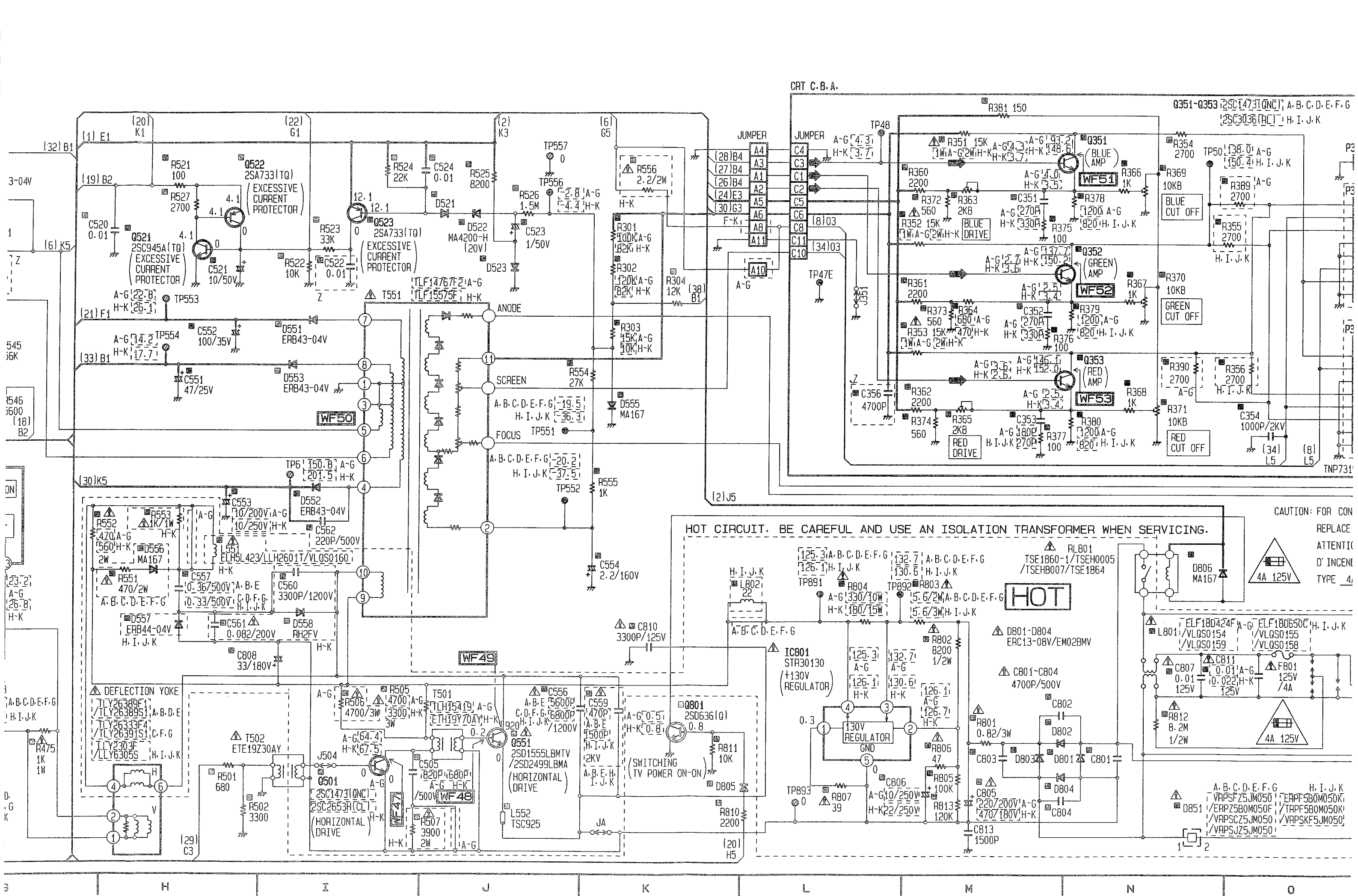
MODEL	MARK
PV-M1326	A
PV-M1326W	B
VV1306	C
VV1306B	D
VV1316W	E
PV-M1346	F
PV-M1356W	G
PV-M2036	H
VV2006	I
VV2016W	J
PV-M2046	K
VV2706	L
NOT USED	Z

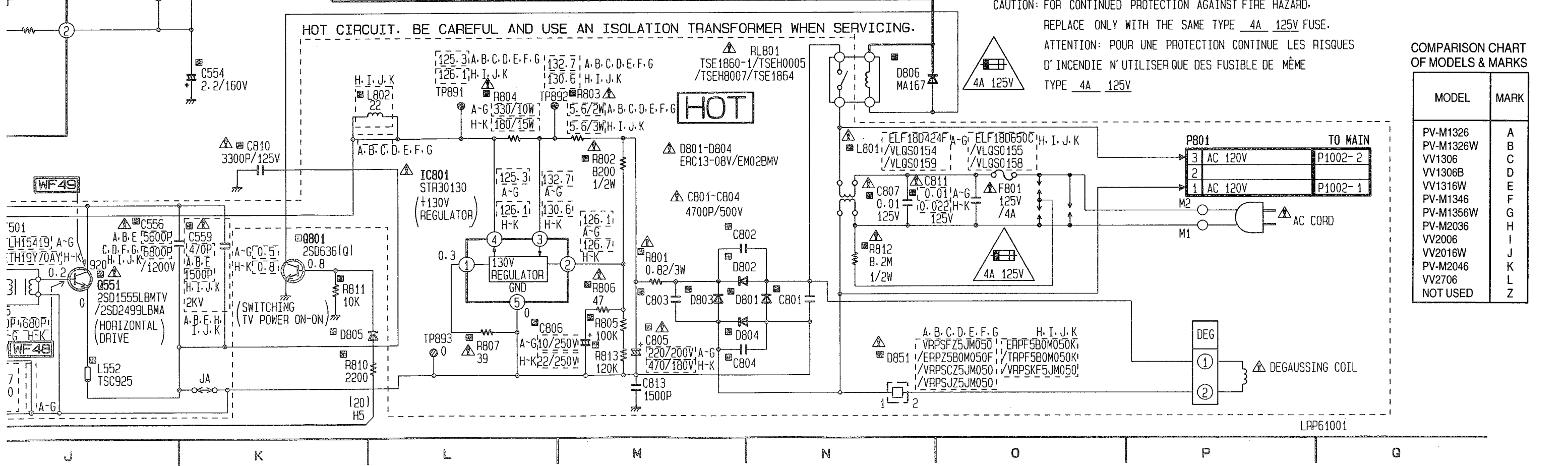
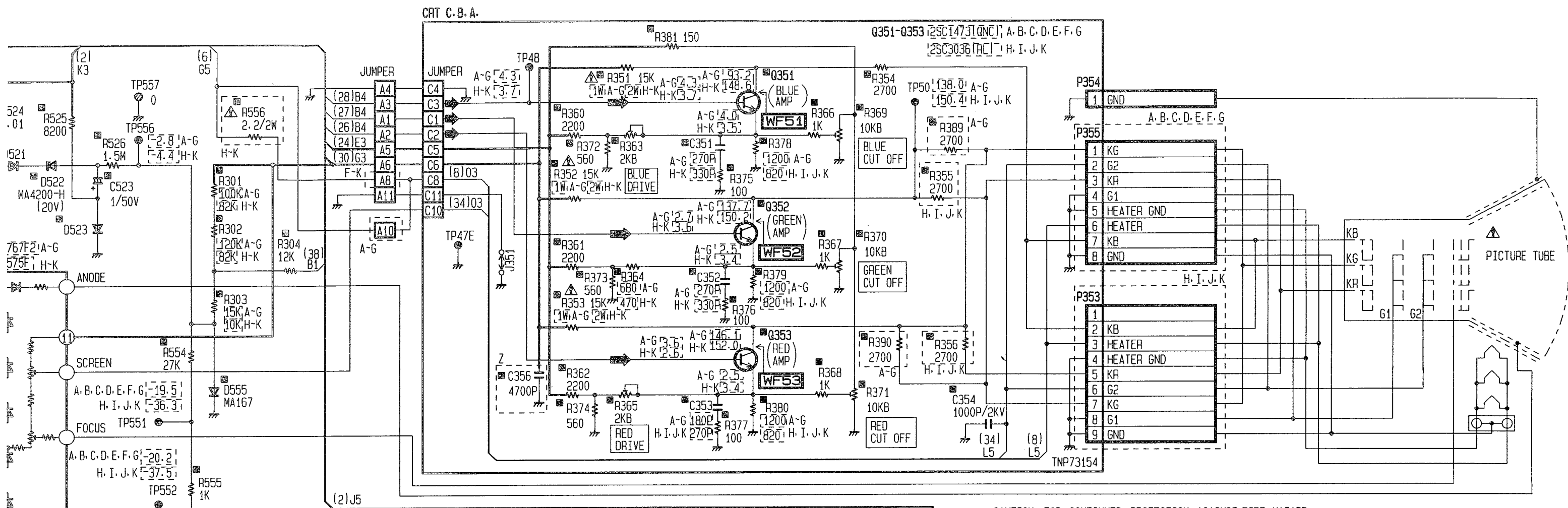
# TV MAIN / CRT SCHEMATIC DIAGRAM (A, B, C, D, E, F, G, H, I, J, K)

**IMPORTANT SAFETY NOTICE:**  
COMPONENTS IDENTIFIED BY THE SIGN  HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SPECIFIED PARTS.

**NOTE:**  
FOR SCHEMATIC AND C.B.A. DIAGRAM NOTES, REFER TO BEGINNING OF SCHEMATIC SECTION (SECTION III)







**COMPARISON CHART OF MODELS & MARKS**

MODEL	MARK
PV-M1326	A
PV-M1326W	B
VV1306	C
VV1306B	D
VV1316W	E
PV-M1346	F
PV-M1356W	G
PV-M2036	H
VV2006	I
VV2016W	J
PV-M2046	K
VV2706	L
NOT USED	Z



# TV MAIN / CRT SCHEMATIC DIAGRAM (L)

**IMPORTANT SAFETY NOTICE:**  
 COMPONENTS IDENTIFIED BY THE SIGN  $\triangle$  HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SPECIFIED PARTS.

**NOTE:**  
 FOR SCHEMATIC AND C.B.A. DIAGRAM NOTES, REFER TO BEGINNING OF SCHEMATIC SECTION (SECTION III).

← VIDEO SIGNAL

## UHF/VHF TUNER/TV DEMODULATOR UNIT U7001 VEGS0584

TO MAIN		P204	
P4001-2	TUNER AUDIO	2	2
P4001-1	GND	1	1

TO MAIN		P201	
P3005-11	TUNER VIDEO	11	11
P3005-10	GND	10	10
P3005-9	GND	9	9
P3005-8	GND	8	8
P3005-7	GND	7	7
P3005-6	AFC	6	(3)C3
P3005-5	CH FREQUENCY LOCK (L)	5	(4)D3
P3005-4	GND	4	(28)K5
P3005-3	BLUE	3	(27)K5
P3005-2	GREEN	2	(26)K5
P3005-1	RED	1	

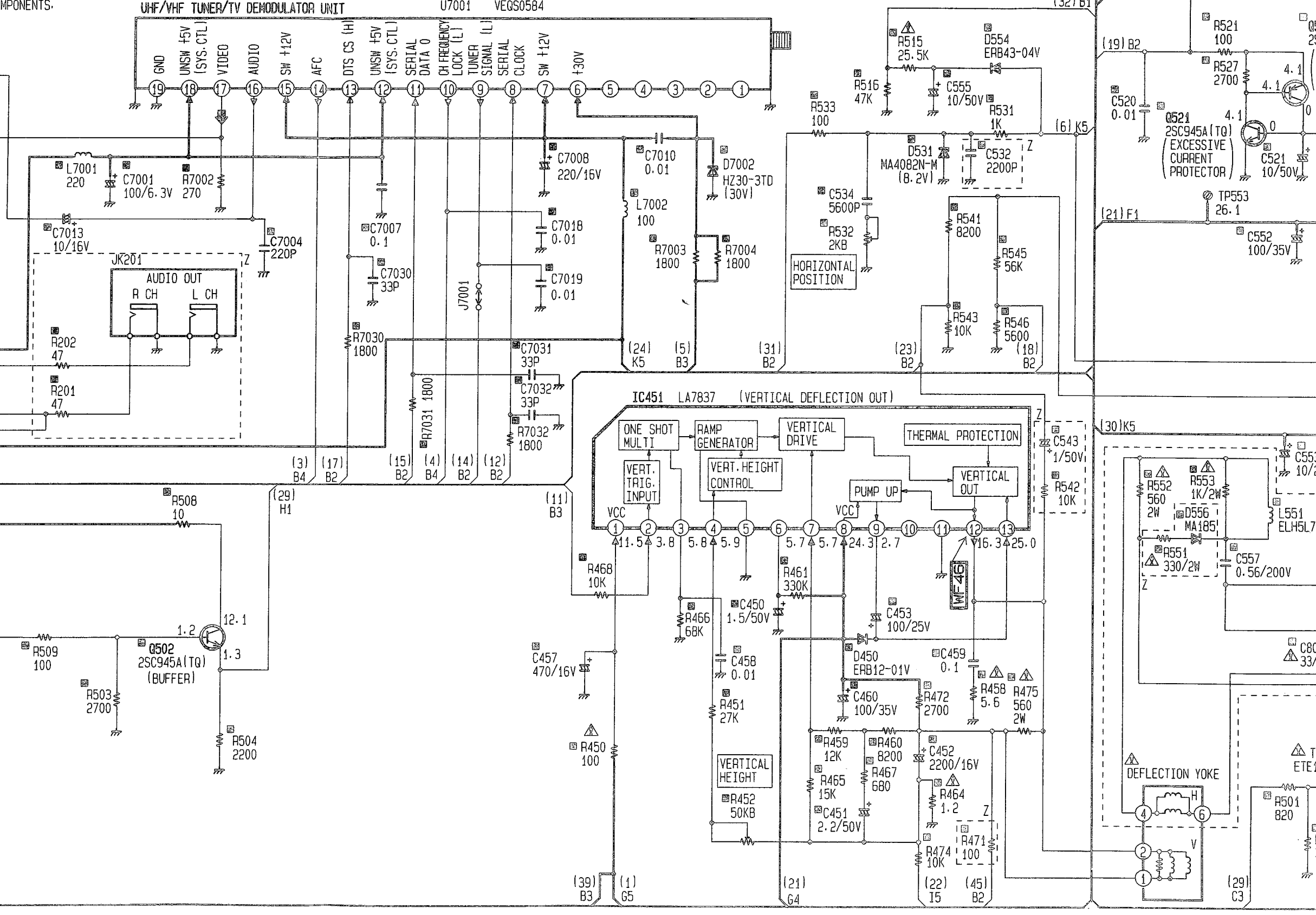
  

TO MAIN		P202	
P3001-1	UNSW +5V (SYS.CTL)	1	
P3001-2	AUDIO L CH	2	
P3001-3	GND	3	
P3001-4	UNSW +37V	4	(5)E3
P3001-5	AUDIO R CH	5	
P3001-6	AUDIO R CH	6	
P3001-7	SW +12V	7	

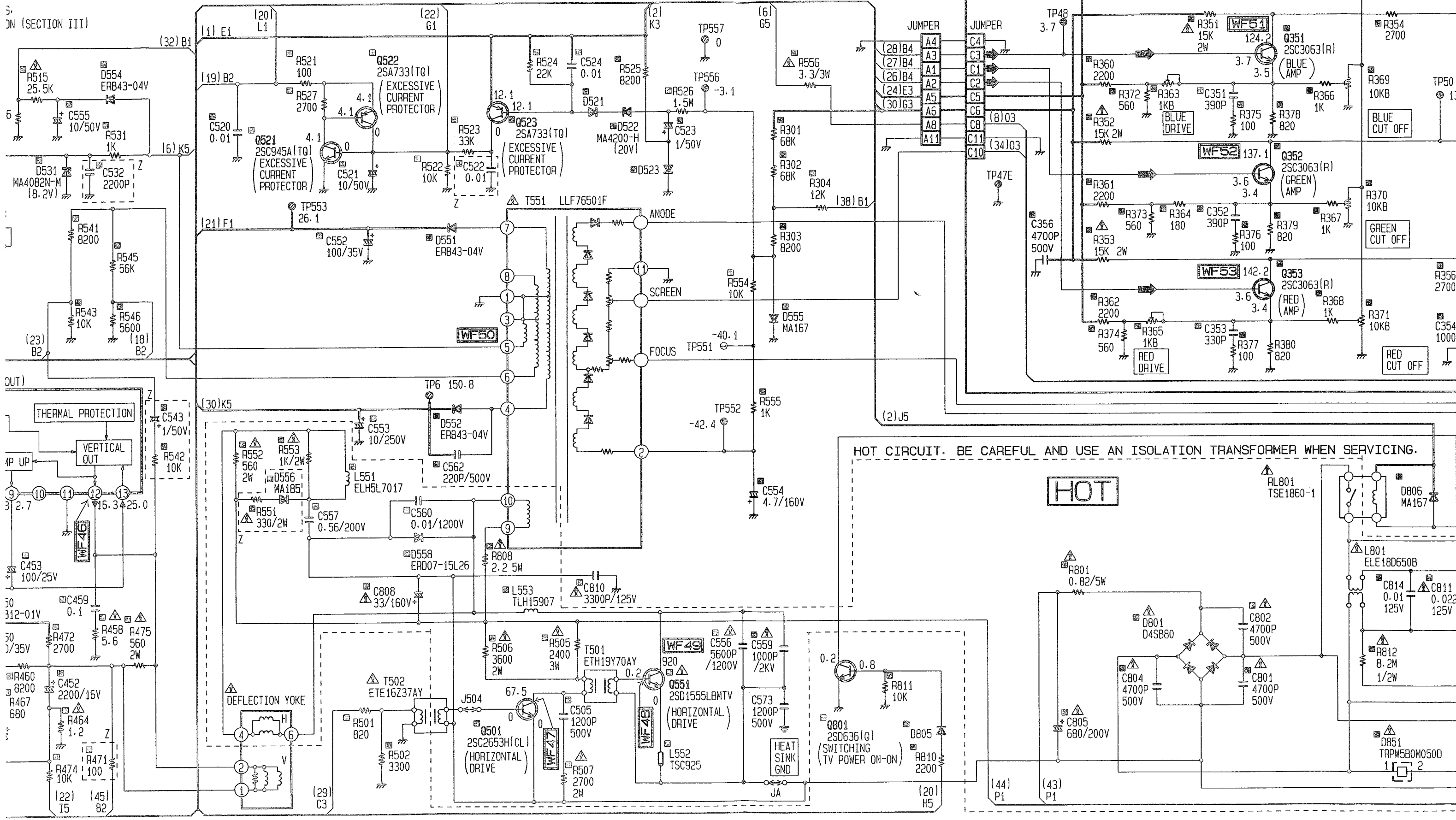
  

TO MAIN		P203	
P5501-19	SW +12V	19	(39)E1
P5501-18	V-OUT	18	(11)E3
P5501-17	SERIAL CLOCK	17	(12)D3
P5501-16	GND	16	
P5501-15	TUNER SIGNAL (L)	15	(14)D3
P5501-14	NECK	14	(45)G1
P5501-13	SERIAL DATA 0	13	(15)D3
P5501-12	H-OUT	12	(17)D3
P5501-11	DTS CS (H)	11	(18)G3
P5501-10	H-PULSE	10	(19)G5
P5501-9	TV POWER ON (H)	9	(23)F3
P5501-8	BLANKING PULSE	8	
P5501-7	GND	7	(31)F3
P5501-6	H-AFC	6	
P5501-5	HIGH VOLTAGE PROTECTOR	5	(32)G5
P5501-4	ABL	4	
P5501-3	ABL	3	(38)K4
P5501-2	ABL	2	
P5501-1	GND	1	

UNLESS OTHERWISE SPECIFIED:  
 DIODE IS MA165 AND  
 WATTAGE OF RESISTORS IS 1/4W.

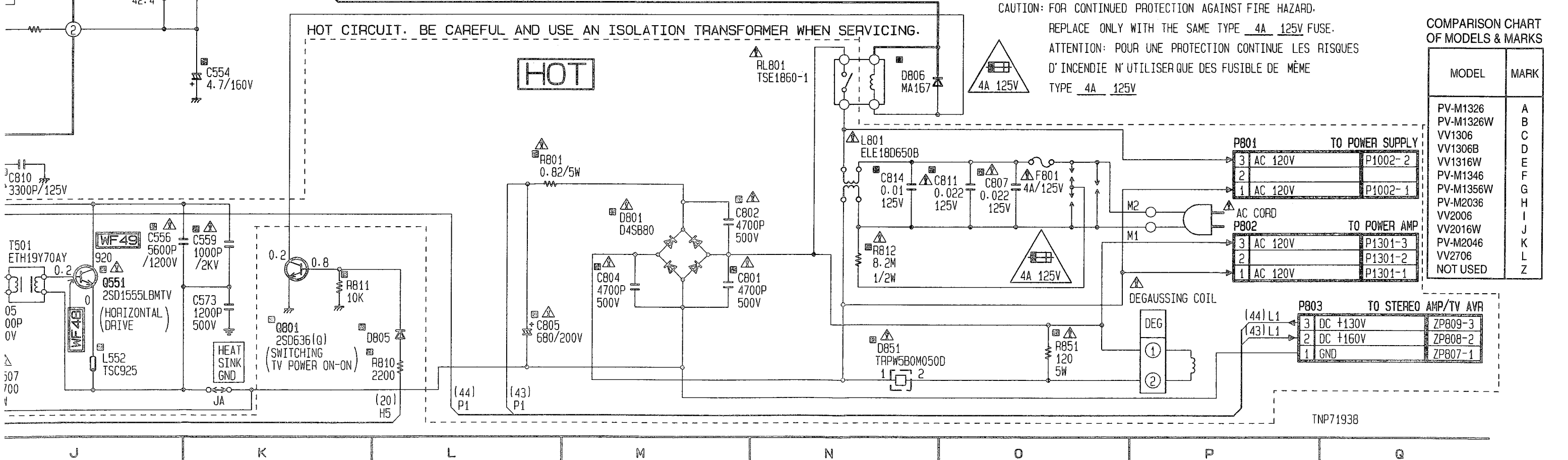
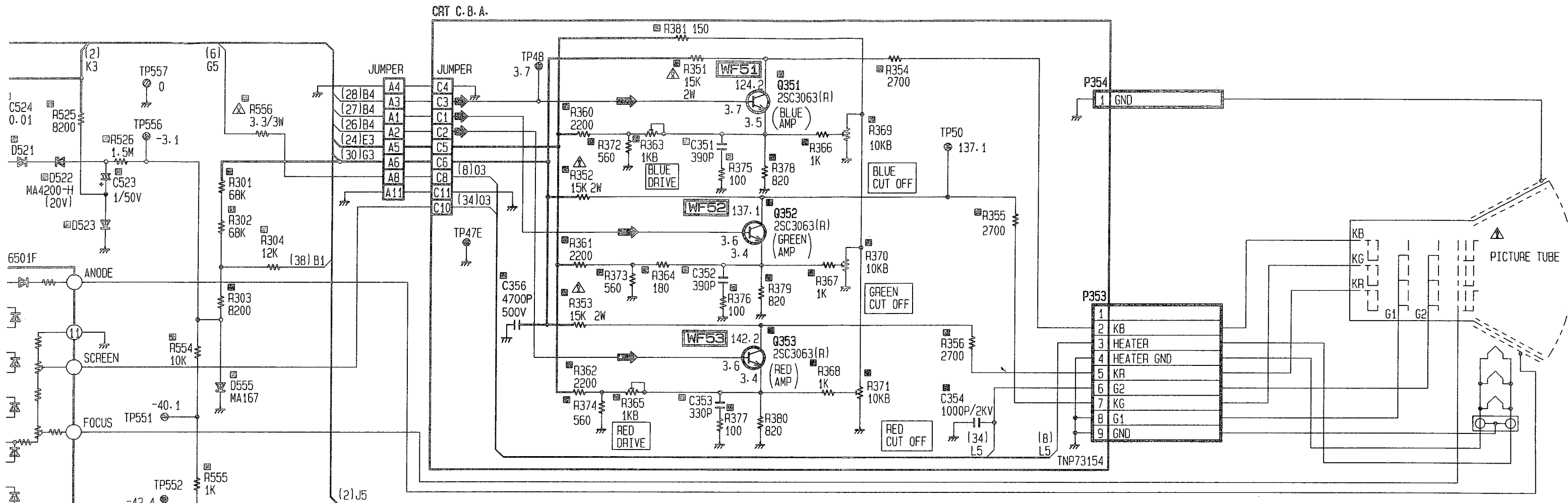


3-63 (SECTION III)



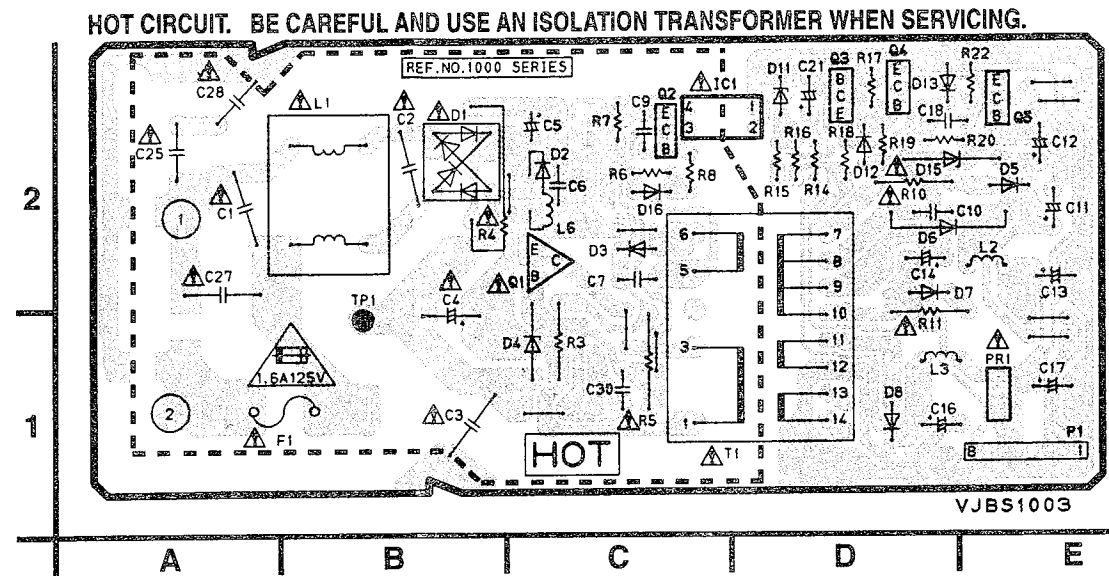
HOT CIRCUIT. BE CAREFUL AND USE AN ISOLATION TRANSFORMER WHEN SERVICING.

HOT



# IV. CIRCUIT BOARD DIAGRAMS

## POWER SUPPLY C.B.A. VEPS1003A1 (L)



POWER SUPPLY	
TRANSISTOR	
Q1001	C-2
Q1002	C-2
Q1003	D-2
Q1004	D-2
Q1005	E-2
IC	
IC1001	C-2
CONNECTOR	
P1001	E-1
TEST POINT	
TP1001	B-2

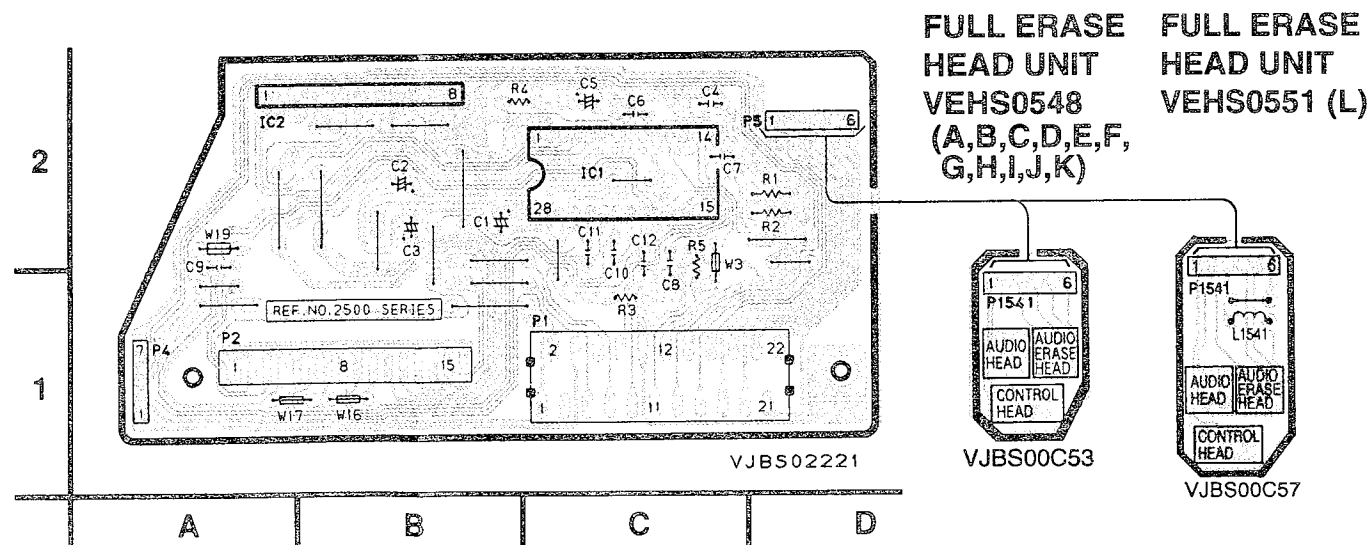
COMPARISON CHART OF MODELS & MARKS

MODEL	MARK
PV-M1326	A
PV-M1326W	B
VV1306	C
VV1306B	D
VV1316W	E
PV-M1346	F
PV-M1356W	G
PV-M2036	H
VV2006	I
VV2016W	J
PV-M2046	K
VV2706	L
NOT USED	Z

## CAPSTAN MOTOR DRIVE C.B.A. VEPS02221B1

NOTE:

MARK "W" ON THE CAPSTAN MOTOR DRIVE C.B.A. INDICATES THAT 0 OHM RESISTOR OR WIRE IS USED. WHEN REPLACING, A WIRE SHOULD BE SUBSTITUTED FOR THE 0 OHM RESISTOR. (W2503, W2516, W2517, W2519)



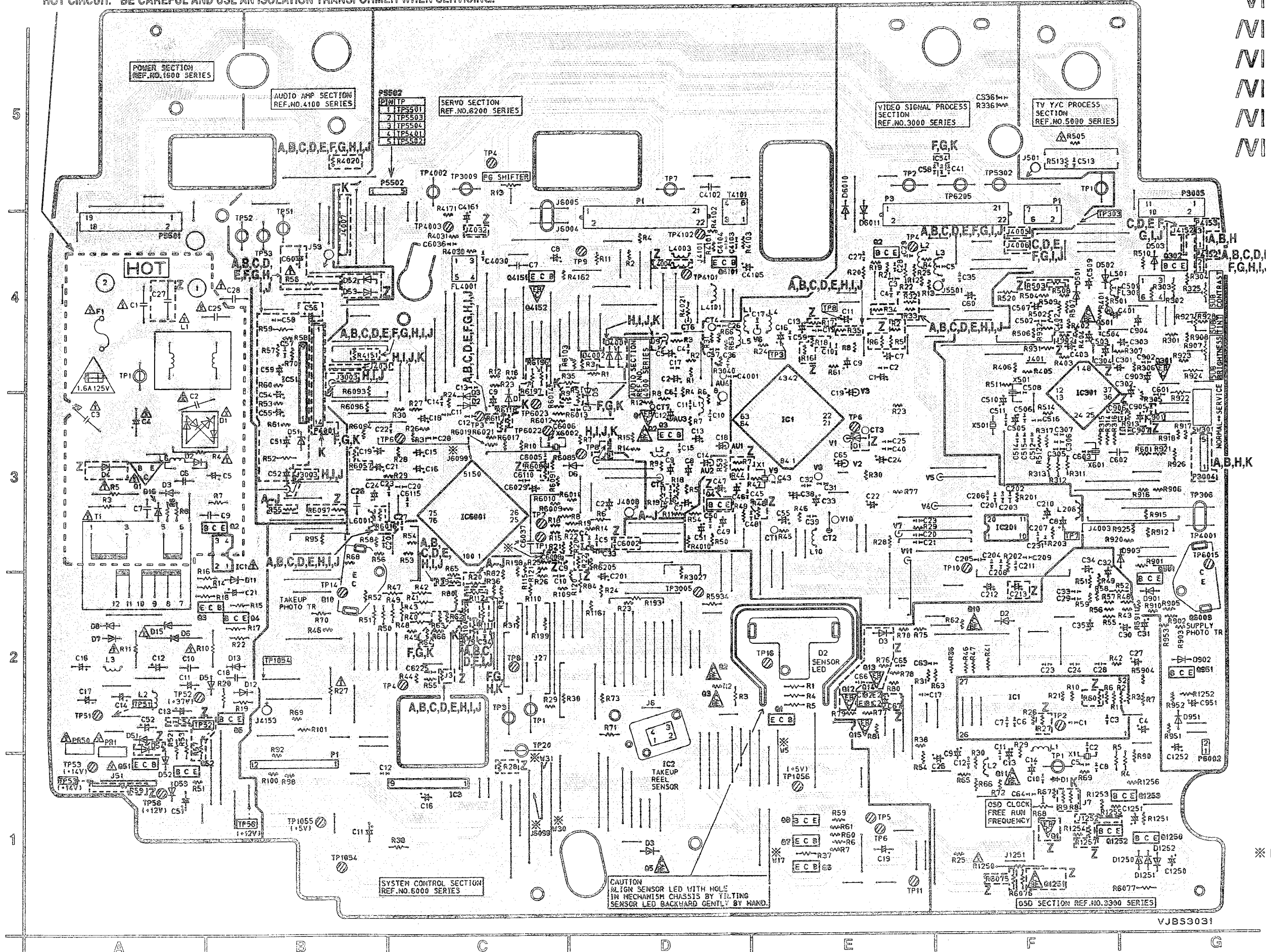
LEADLESS COMPONENT PARTS LOCATION GUIDE  
CAPSTAN MOTOR DRIVE C.B.A.

R2503	C-1	C2504	C-2	C2508	C-1	C2511	C-2
R2504	C-2	C2506	C-2	C2509	A-2	C2512	C-2
R2505	C-2	C2507	C-2	C2510	C-1		

# MAIN (POWER SUPPLY/SIGNAL PROCESS/OSD/AUDIO/AUDIO AMP/TV YC PROCESS/SYSTEM CONTROLS)

HOT CIRCUIT. BE CAREFUL AND USE AN ISOLATION TRANSFORMER WHEN SERVICING.

VI  
MI  
MI  
MI  
MI



VJBS3031

ERVVO) C B.A

PS3031B1 (A,B)

PS3031C1(C,D,E)

PS3031A1(F,G)

PS3031F1(H)

PS3031G1(I,J)


PS3031D1(K)

COMPARISON CHART OF MODELS & MARKS

MODEL	MARK
PV-M1326	A
PV-M1326W	B
VV1306	C
VV1306B	D
VV1316W	E
PV-M1346	F
PV-M1356W	G
PV-M2036	H
VV2006	I
VV2016W	J
PV-M2046	K
VV2706	L
NOT USED	Z

NOTE:  
FOR SCHEMATIC AND C.B.A. DIAGRAM NOTES,  
REFER TO BEGINNING OF SCHEMATIC SECTION (SECTION III).

NOTE:  
SIGNAL WAVEFORM OF POINTS WITH MARKS "V1.....AU1.....CT1....."  
ARE SHOWN IN SIGNAL WAVEFORM PAGE OR VIDEO/NORMAL AUDIO  
BLOCK DIAGRAM PAGE.

IMPORTANT SAFETY NOTICE:  
COMPONENTS IDENTIFIED BY THE SIGN  HAVE  
SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY.  
WHEN REPLACING ANY OF THESE COMPONENTS,  
USE ONLY THE SPECIFIED PARTS.

NOTE:  
FOR EARLY PRODUCTS, LONG JUMPER J6099 AND C6008 (ECUV1E104ZFN) ARE USED.  
HOWEVER, SHORT JUMPERS W5, W17, W30, W31 AND C6037 ARE ADDED.  
ALSO LONG JUMPER J6099 AND C6008 ARE DELETED ON RUNNING CHANGE BASIS.

MAIN	
IC	
IC1001	B-3
IC3001	E-3
IC3201	F-3
IC3301	F-2
IC4151	B-4
IC5301	F-3
IC6001	C-3
IC6002	D-1
IC6003	C-1

MAIN	
ADJUSTMENT	
R3368	F-1
R5325	G-4
R5907	G-4
R5927	G-4
R6213	C-5

SIGNAL CHECK POINT	
V1	E-3
V2	E-3
V3	E-3
V4	E-3
V5	E-3
V6	E-4
V7	E-3
V8	E-3
V9	E-3
V10	E-3
V11	E-3
AU1	D-3
AU2	D-3
AU3	D-3
AU4	D-4
CT1	E-3
CT2	E-3
CT3	E-3
CT5	D-3
CT6	D-4
CT7	D-3

MAIN	
TRANSISTOR	
Q1001	A-3
Q1002	B-3
Q1003	A-2
Q1004	B-2
Q1005	B-2
Q1051	A-1
Q1052	A-1
Q1250	G-1
Q1251	F-1
Q1252	F-1
Q1253	G-1
Q3002	E-4
Q3004	D-3
Q3301	F-1
Q3310	F-2
Q3311	F-1
Q3312	E-2
Q3313	E-2
Q3314	E-2
Q3315	E-2
Q4001	D-3
Q4002	D-3
Q4003	D-3
Q4101	D-4
Q4151	C-4
Q4152	C-4
Q5301	G-4
Q5302	G-4
Q5901	G-2
Q5951	G-4
Q6001	E-2
Q6002	D-2
Q6003	D-2
Q6005	D-1
Q6006	E-1
Q6007	E-1
Q6008	E-1
Q6009	G-2
Q6010	B-2

MAIN	
CONNECTOR	
P3001	F-5
P3003	E-5
P3004	G-3
P3005	G-5
P4001	B-3
P4152	G-4
P4153	G-4
P5501	A-4
P5502	B-5
P6001	B-1
P6002	G-1
P6201	D-5

MAIN	
TEST POINT	
TP1001	A-4
TP1051	A-2
※ TP1051	A-2
TP1052	A-2
※ TP1052	A-2
TP1053	A-1
※ TP1053	A-1
TP1054	B-1
※ TP1054	B-2
TP1055	B-1
TP1056	E-1
TP1058	A-1
※ TP1058	B-1
TP3001	F-5
TP3002	E-5
TP3003	E-4
TP3004	E-4
TP3005	D-2
TP3006	E-3
TP3007	F-3
TP3008	E-4
TP3009	C-5
TP3010	F-2
TP3301	F-1
TP3302	F-2
TP4001	G-3
TP4002	C-5
TP4003	C-4
TP4101	D-4
TP4102	D-4
TP4151	B-4
TP4152	B-4
TP4153	B-4
TP5302	F-5
TP5303	F-4
TP5306	G-3
TP6001	C-2
TP6003	C-2
TP6004	C-2
TP6005	E-1
TP6006	E-1
TP6008	C-2
TP6011	E-1
TP6014	B-2
TP6015	G-3
TP6016	E-2
TP6020	C-2
TP6022	C-3
TP6023	C-3
TP6201	C-3
TP6202	C-3
TP6203	C-3
TP6204	C-5
TP6205	F-5
TP6206	B-3
TP6207	D-5
TP6208	D-3
TP6209	D-4

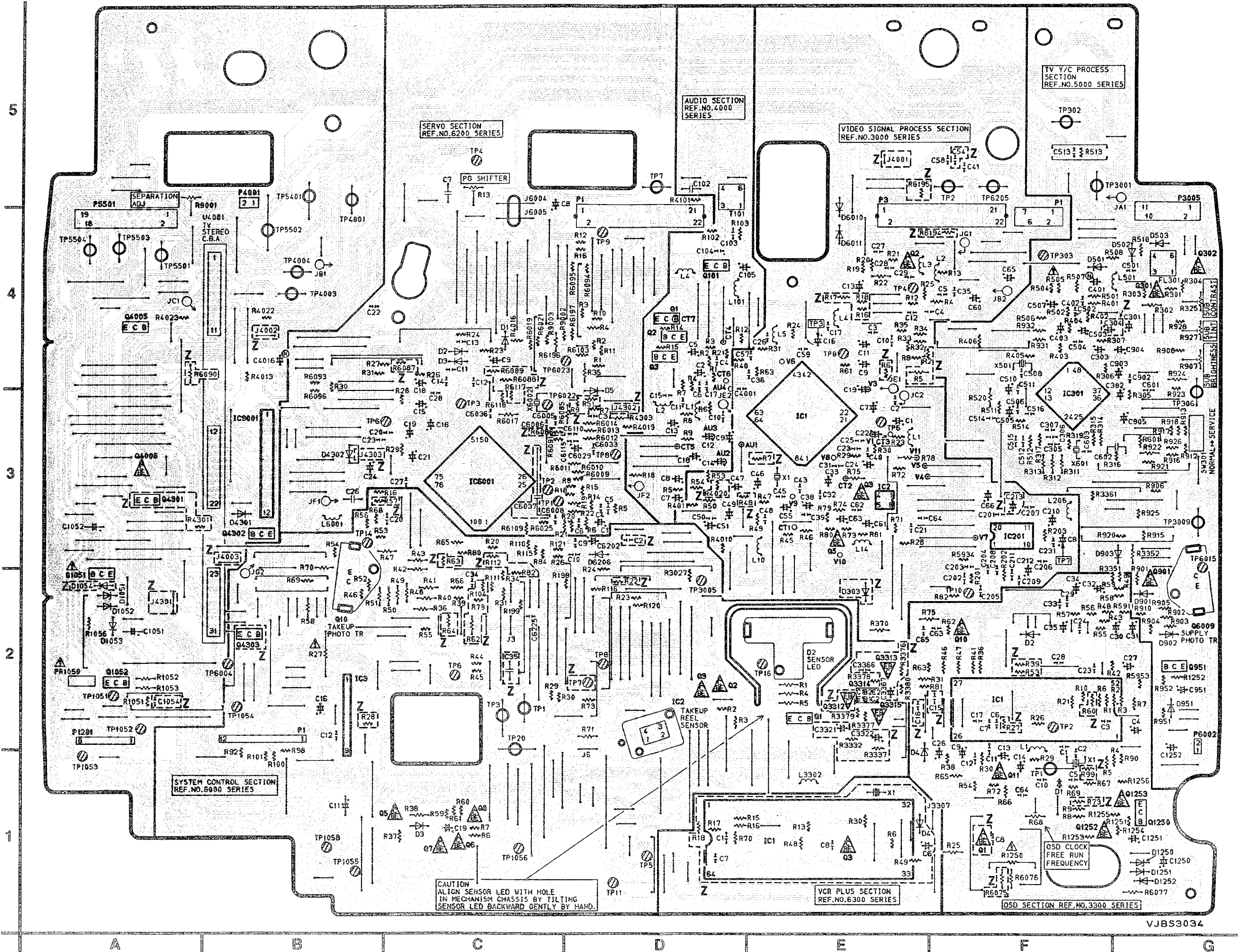
※ COMPONENT SIDE

LEADLESS COMPONENT PARTS LOCATION GUIDE

MAIN C.B.A.

Q1251	F-1	R3077	E-3	R4015	D-3	R5918	G-3	R6092	B-1	C3034	D-4	C4106	D-4
Q3301	F-1	R3201	F-3	R4018	D-3	R5920	F-3	R6093	B-3	C3035	F-4	C4157	B-4
Q3310	F-2	R3202	F-2	R4020	B-5	R5921	G-3	R6094	B-3	C3036	D-4	C4158	B-4
Q3311	F-1	R3203	F-3	R4030	C-4	R5923	G-4	R6095	B-3	C3039	E-3	C5305	F-3
Q3312	E-2	R3301	F-2	R4031	C-4	R5925	G-3	R6096	B-3	C3040	E-3	C5306	F-3
Q3313	E-2	R3302	G-2	R4032	C-4	R5926	G-3	R6098	B-1	C3041	F-4	C5307	F-3
Q3315	E-2	R3303	G-2	R4101	D-4	R5931	F-4	R6099	D-1	C3042	E-3	C5402	F-4
Q4001	D-3	R3306	F-2	R4102	D-4	R5932	F-4	R6100	B-1	C3043	E-3	C5501	G-4
Q4002	D-3	R3307	G-2	R4103	D-4	R5951	G-1	R6109	C-2	C3045	D-3	C5502	F-4
Q4152	C-4	R3308	F-1	R4151	B-4	R5952	G-2	R6110	C-2	C3048	D-3	C5504	F-4
Q5301	G-4	R3309	F-1	R4153	B-3	R5953	G-2	R6115	C-2	C3050	D-3	C5506	F-3
Q5501	F-4	R3310	F-2	R4157	B-4	R6002	D-2	R6116	D-2	C3054	F-4	C5508	F-3
Q6002	D-2	R3321	F-2	R4158	B-4	R6006	E-1	R6117	C-3	C3057	D-4	C5511	F-3
Q6003	D-2	R3325	F-1	R4160	B-4	R6007	E-1	R6118	C-3	C3058	E-5	C5512	F-3
Q6005	D-1	R3326	F-2	R4161	B-3	R6009	C-3	R6120	D-2	C3059	E-4	C5513	F-5
R1051	A-1	R3327	F-2	R4162	C-4	R6010	C-3	R6121	C-2	C3201	F-3	C5514	F-3
R1056	A-2	R3329	F-2	R4170	B-4	R6011	C-3	R6199	C-2	C3202	F-3	C5515	F-3
R1251	G-1	R3330	F-1	R4171	C-4	R6012	C-3	R6199	C-2	C3203	F-3	C5516	F-3
R1252	G-2	R3336	F-2	R5301	G-4	R6013	C-3	R6201	D-4	C3204	F-3	C5602	F-3
R1253	F-1	R3338	E-2	R5303	G-4	R6014	C-3	R6202	D-4	C3205	F-3	C5603	F-3
R1254	F-1	R3341	F-2	R5305	G-3	R6016	B-3	R6203	D-4	C3206	F-3	C5901	G-3
R1255	F-1	R3342	F-2	R5306	G-4	R6017	C-3	R6204	D-4	C3207	F-3	C5902	G-4
R1256	G-1	R3343	G-2	R5307	G-4	R6019	C-3	R6205	D-3	C3208	F-2	C5906	F-3
R1257	F-1	R3346	F-2	R5314	F-3	R6021	C-3	R6207	D-3	C3209	F-3	C5907	G-3
R3002	E-4	R3347	F-2	R5315	F-3	R6022	D-3	R6208	D-3	C3211	F-2	C6001	E-2
R3004	E-4	R3348	G-2	R5316	F-3	R6023	D-2	R6209	C-3	C3230	F-2	C6002	D-3
R3005	E-4	R3349	F-2	R5317	F-3	R6024	D-2	R6210	C-3	C3231	F-3	C6005	C-3
R3006	E-4	R3351	F-2	R5319	F-3	R6025	C-3	R6211	D-4	C3301	F-2	C6006	C-3
R3007	D-3	R3354	E-1	R5401	F-4	R6026	C-2	R6212	C-4	C3302	F-2	C6008	C-3
R3008	E-4	R3355	F-2	R5402	F-4	R6028	C-1	R6214	D-3	C3303	F-2	C6009	C-3
R3012	E-4	R3356	F-2	R5403	F-4	R6029	C-2	R6215	C-3	C3305	F-1	C6010	C-2
R3013	E-4	R3357	F-2	R5404	F-4	R6030	C-2	R6216	C-4	C3306	F-2	C6012	B-2
R3016	E-4	R3358	F-2	R5405	F-4	R6031	C-2	R6218	C-3	C3307	F-2	C6014	E-1
R3017	E-4	R3359	F-2	R5406	F-4	R6034	C-2	R6219	D-3	C3308	F-1	C6020	B-3
R3018	E-4	R3360	F-2	R5407	F-5	R6036	C-2	R6220	D-3	C3310	F-1	C6022	G-2
R3019	E-4	R3363	E-2	R5501	F-4	R6039	C-2	R6221	C-3	C3311	F-1	C6023	B-2
R3020	E-4	R3364	F-2	R5502	F-4	R6044	C-2	R6222	D-3	C3312	F-1	C6024	D-2
R3021	E-4	R3365	F-1	R5504	F-4	R6045	C-2	R6223	C-4	C3317	E-2	C6026	B-1
R3023	E-3	R3366	F-1	R5505	F-5	R6046	B-2	R6224	C-3	C3318	F-2	C6027	B-2
R3024	E-4	R3367	F-1	R5506	F-4	R6052	B-2	R6226	C-3	C3319	F-2	C6028	B-1
R3025	E-4	R3369	F-1	R5507	F-4	R6053	C-3	R6227	C-3	C3320	F-2	C6032	C-1
R3027	D-2	R3370	E-2	R5508	F-4	R6054	C-3	R6228	C-3	C3323	F-2	C6033	D-3
R3028	E-3	R3372	F-1	R5509	F-4	R6055	C-2	R6229	C-3	C3324	F-2	C6034	C-2
R3029	E-3	R3375	E-2	R5510	G-4	R6056	B-3	R6230	C-3	C3325	F-2	C6035	C-2
R3030	E-3	R3376	E-2	R5511	F-4	R6057	B-3	R6231	C-3	C3328	F-2	C6036	C-4
R3031	D-4	R3377	E-2	R5512	F-3	R6058	B-3	R6251	D-3	C3329	F-2	C6099	B-1
R3032	E-4	R3378	E-2	R5513	F-5	R6059	E-1	C1054	A-2	C3333	F-2	C6110	C-3
R3033	E-4	R3379	E-2	R5514	F-3	R6060	E-1	C3002	E-4	C3362	F-2	C6115	C-3
R3034	E-4	R3380	E-2	R5601	G-3	R6061	E-1	C3003	E-4	C3363	E-2	C6203	D-3
R3035	E-4	R3381	E-2	R5602	G-3	R6062	C-2	C3004	E-4	C3364	F-1	C6204	D-3
R3036	E-3	R3390	G-1	R5603	G-3	R6063	C-2	C3005	F-4	C3365	E-2	C6205	D-3
R3037	E-3	R4001	D-4	R5901	G-3	R6064	C-2	C3010	E-4	C3366	E-2	C6206	D-3
R3044	D-3	R4002	D-4	R5902	G-2	R6065	C-2	C3012	E-4	C4001	D-4	C6210	C-3
R3045	E-3	R4003	D-4	R5903	G-2	R6066	C-2	C3017	E-4	C4004	D-4	C6211	C-3
R3046	E-3	R4004	D-3	R5904	G-2	R6068	B-3	C3021	E-3	C4006	D-3	C6212	C-3
R3047	D-3	R4005	D-3	R5905	G-2	R6069	B-2	C3020	E-3	C4010	D-3	C6213	C-4
R3048	E-3	R4006	D-3	R5906	G-3	R6072	D-2	C3023	E-3	C4011	D-3	C6214	C-3
R3049	D-3	R4007	D-3	R5910	G-2	R6073	D-2	C3025	E-3	C4015	D-3	C6220	C-3
R3050	D-3	R4008	D-3	R5911	G-2	R6074	D-1	C3026	D-4	C4016	D-3	C6222	B-3
R3053	D-3	R4009	D-3	R5912	G-3	R6082	C-2	C3027	E-4	C4017	D-4	C6223	B-3
R3054	D-3	R4010	D-3	R5913	G-3	R6085	C-3	C3028	E-4	C4030	C-4	C6225	C-2
R3061	E-4	R4011	D-3	R5915	G-3	R6086	C-3	C3029	E-4	C4031	C-4	C6228	C-3
R3063	D-4	R4012	D-3	R5916	G-3	R6088	C-3	C3031	E-3	C4103	D-4		
R3066	D-4	R4014	D-3	R5917	G-3	R6091	C-3	C3032	E-3	C4104	D-4		

MAIN (SIGNAL PROCESS/OSD/AUDIO/TV Y/C PROCESS/SYSTEM CONTROL/SERVO/VCR PLUS) C.B.A VEPS30



IMPORTANT SAFETY NOTICE:  
COMPONENTS IDENTIFIED BY THE SIGN  $\Delta$  HAVE  
SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY.  
WHEN REPLACING ANY OF THESE COMPONENTS,  
USE ONLY THE SPECIFIED PARTS.

NOTE:  
SIGNAL WAVEFORM OF POINTS WITH MARKS "V1,....,AU1,....,CT1,...."  
ARE SHOWN IN SIGNAL WAVEFORM PAGE OR VIDEO/NORMAL AUDIO  
BLOCK DIAGRAM PAGE.

LEADLESS COMPONENT PARTS LOCATION GUIDE

MAIN C.B.A.		MAIN C.B.A.		MAIN C.B.A.		MAIN C.B.A.		MAIN C.B.A.		MAIN C.B.A.		MAIN C.B.A.		MAIN C.B.A.		MAIN C.B.A.		MAIN C.B.A.		MAIN C.B.A.		MAIN C.B.A.	
Q1252	F-1	R3063	E-4	R3399	F-1	R5911	G-2	R6082	C-2	R6318	D-1	C3329	F-2										
Q1253	G-1	R3071	E-3	R4001	D-4	R5912	G-3	R6084	C-3	R6330	E-1	C3333	F-2										
Q3002	E-4	R3072	E-3	R4002	D-4	R5913	G-3	R6086	C-3	R6348	E-1	C3363	F-2										
Q3003	E-3	R3073	E-3	R4003	D-4	R5915	G-3	R6087	C-4	R6349	E-1	C3364	F-1										
Q3005	E-3	R3074	E-3	R4004	D-4	R5916	G-3	R6088	C-4	R6370	D-1	C3365	E-2										
Q3301	F-1	R3079	E-3	R4005	D-3	R5917	G-3	R6089	C-4	R9002	C-4	C3366	E-2										
Q3310	F-2	R3080	E-3	R4006	D-3	R5918	G-3	R6091	C-3	R9003	C-4	C4001	D-3										
Q3311	F-1	R3081	E-3	R4007	D-3	R5920	F-3	R6092	B-1	C1054	A-2	C4004	D-4										
Q3312	E-2	R3082	F-2	R4008	D-3	R5921	G-3	R6093	B-4	C3002	E-3	C4006	D-3										
Q3313	E-2	R3201	F-2	R4009	D-3	R5923	G-3	R6094	D-4	C3003	E-4	C4010	D-3										
Q3314	E-2	R3202	F-3	R4010	D-3	R5925	G-3	R6095	D-4	C3004	F-4	C4011	D-3										
Q3315	E-2	R3203	F-3	R4011	D-3	R5926	G-3	R6096	B-3	C3005	F-4	C4015	D-3										
Q4006	A-3	R3301	F-2	R4012	E-4	R5928	G-4	R6098	B-1	C3010	E-4	C4017	D-3										
Q5301	G-4	R3302	F-2	R4013	B-4	R5931	F-4	R6100	B-1	C3012	E-4	C4103	D-4										
Q5302	G-4	R3303	G-2	R4014	D-4	R5932	F-4	R6101	B-1	C3017	E-4	C4104	D-4										
Q5901	G-2	R3304	G-1	R4015	D-4	R5934	F-3	R6103	D-4	C3021	E-3	C5305	F-3										
Q6002	D-2	R3305	F-1	R4016	C-4	R5951	G-2	R6104	C-2	C3023	E-3	C5306	F-3										
Q6003	D-2	R3306	F-2	R4018	D-3	R5952	G-2	R6109	C-3	C3025	E-3	C5307	F-3										
Q6005	C-1	R3307	G-2	R4019	D-3	R5953	G-2	R6110	C-3	C3026	E-4	C5402	F-4										
Q6006	C-1	R3308	F-1	R4020	D-3	R6002	D-2	R6111	C-2	C3027	E-4	C5501	G-4										
Q6007	C-1	R3309	F-1	R4021	D-4	R6003	D-2	R6112	C-3	C3028	E-4	C5502	F-4										
Q6008	C-1	R3310	F-2	R4022	B-4	R6006	C-1	R6115	C-3	C3029	E-4	C5504	F-4										
Q6303	E-1	R3321	F-2	R4023	A-4	R6007	C-1	R6116	D-2	C3031	E-3	C5506	F-3										
D3301	F-1	R3326	F-2	R4101	D-5	R6009	D-3	R6117	C-4	C3032	E-3	C5508	F-4										
R1051	A-2	R3327	F-2	R4102	D-4	R6010	D-3	R6118	C-3	C3035	F-4	C5511	F-4										
R1251	G-1	R3329	F-1	R4103	D-4	R6011	C-3	R6120	D-2	C3036	E-4	C5512	F-3										
R1252	G-2	R3330	F-1	R4301	A-3	R6012	D-3	R6121	C-3	C3039	E-3	C5513	F-5										
R1253	F-1	R3331	F-2	R4302	B-3	R6013	D-3	R6194	E-4	C3040	E-3	C5514	F-3										
R1254	G-1	R3332	E-2	R5301	G-4	R6014	D-3	R6195	E-5	C3041	F-5	C5515	F-3										
R1255	F-1	R3335	F-2	R5303	G-4	R6016	C-3	R6197	D-4	C3043	E-3	C5516	F-3										
R1256	G-1	R3336	F-2	R5304	G-4	R6019	C-4	R6198	C-2	C3045	E-3	C5601	G-4										
R3002	E-4	R3337	E-1	R5305	G-3	R6020	C-3	R6199	C-2	C3048	E-3	C5603	F-3										
R3004	F-4	R3338	F-1	R5306	F-4	R6021	C-4	R6201	D-4	C3050	D-3	C5902	G-4										
R3006	E-4	R3339	F-2	R5307	F-4	R6022	D-2	R6202	D-4	C3054	F-5	C6002	D-3										
R3007	E-3	R3341	F-2	R5314	F-3	R6023	D-2	R6203	D-4	C3057	D-4	C6005	C-3										
R3008	E-4	R3342	F-2	R5315	F-3	R6024	D-2	R6204	D-4	C3058	F-5	C6006	C-3										
R3012	E-4	R3343	F-2	R5316	G-3	R6025	C-3	R6205	D-3	C3059	E-4	C6008	C-3										
R3013	F-4	R3346	F-2	R5317	F-3	R6026	C-3	R6206	D-3	C3062	E-3	C6009	D-3										
R3016	E-4	R3347	F-2	R5319	F-3	R6028	B-2	R6207	D-3	C3064	E-3	C6010	D-3										
R3017	E-4	R3348	F-2	R5401	F-4	R6029	C-2	R6208	D-3	C3201	F-3	C6012	B-2										
R3018	E-4	R3349	G-2	R5402	F-4	R6030	C-2	R6209	D-3	C3202	F-2	C6020	C-3										
R3019	E-4	R3351	G-2	R5403	F-4	R6031	C-2	R6210	D-4	C3203	F-3	C6033	D-3										
R3020	E-4	R3353	F-2	R5404	F-4	R6034	C-3	R6211	D-4	C3204	F-3	C6034	C-2										
R3021	E-4	R3354	F-1	R5405	F-4	R6037	C-1	R6212	D-4	C3205	F-2	C6036	C-3										
R3023	E-3	R3355	F-2	R5406	F-4	R6039	C-2	R6214	D-3	C3206	F-3	C6110	D-3										
R3024	E-4	R3356	F-2	R5501	F-4	R6044	C-2	R6215	D-3	C3207	F-3	C6115	C-3										
R3025	E-4	R3357	F-2	R5502	F-4	R6045	C-2	R6216	D-4	C3208	F-2	C6203	D-3										
R3027	D-2	R3358	F-2	R5504	F-4	R6046	B-2	R6218	D-3	C3209	F-2	C6204	D-3										
R3028	E-3	R3359	F-2	R5505	F-4	R6052	B-2	R6219	D-3	C3211	F-3	C6205	D-3										
R3029	E-3	R3360	F-2	R5506	F-4	R6053	B-3	R6220	D-3	C3231	F-3	C6206	D-3										
R3030	E-3	R3361	F-3	R5507	F-4	R6054	B-3	R6221	C-3	C3301	F-1	C6211	C-4										
R3031	E-4	R3362	F-2	R5508	F-4	R6055	C-2	R6222	D-3	C3302	F-1	C6212	C-4										
R3032	E-4	R3363	E-2	R5510	G-4	R6056	B-3	R6223	C-4	C3303	F-2	C6213	C-4										
R3033	E-4	R3365	F-1	R5511	F-3	R6057	C-3	R6224	C-4	C3305	F-1	C6214	C-4										
R3034	E-4	R3366	F-1	R5512	F-3	R6059	C-1	R6226	C-4	C3306	F-2	C6220	C-3										
R3035	E-4	R3367	F-1	R5513	F-5	R6060	C-1	R6227	B-4	C3307	F-2	C6222	B-4										
R3040	D-4	R3369	F-1	R5514	F-3	R6061	C-1	R6228	C-3	C3308	F-1	C6223	B-3										
R3045	E-3	R3372	F-1	R5601	G-3	R6063	C-3	R6229	C-3	C3310	F-1	C6225	C-2										
R3046	E-3	R3373	F-1	R5901	G-2	R6064	C-2	R6230	B-4	C3311	F-1	C6227	C-3										
R3047	E-3	R3376	E-2	R5902	G-2	R6065	C-3	R6231	B-4	C3312	F-1	C6228	C-3										
R3048	D-3	R3377	E-2	R5903	G-2	R6066	C-2	R6251	D-3	C3315	F-2	C6301	D-1										
R3049	E-3	R3378	E-2	R5904	G-2	R6068	B-3	R6306	E-1	C3316	E-2	C6307	D-1										
R3050	D-3	R3379	E-2	R5905	G-2	R6069	B-2	R6313	E-1	C3317	F-2	C6308	E-1										
R3053	D-3	R3380	E-2	R5906	G-3	R6073	D-2	R6315	E-1	C3323	F-2												
R3054	D-3	R3381	E-2	R5908	G-4	R6079	C-2	R6316	E-1	C3324	F-2												
R3061	E-4	R3390	G-1	R5910	G-2	R6080	C-3	R6317	D-1	C3328	F-2												

NOTE:  
FOR SCHEMATIC AND C.B.A. DIAGRAM NOTES,  
REFER TO BEGINNING OF SCHEMATIC SECTION (SECTION III).

COMPARISON CHART  
OF MODELS & MARKS

MODEL	MARK
PV-M1326	A
PV-M1326W	B
VV1306	C
VV1306B	D
VV1316W	E
PV-M1346	F
PV-M1356W	G
PV-M2036	H
VV2006	I
VV2016W	J
PV-M2046	K
VV2706	L
NOT USED	Z

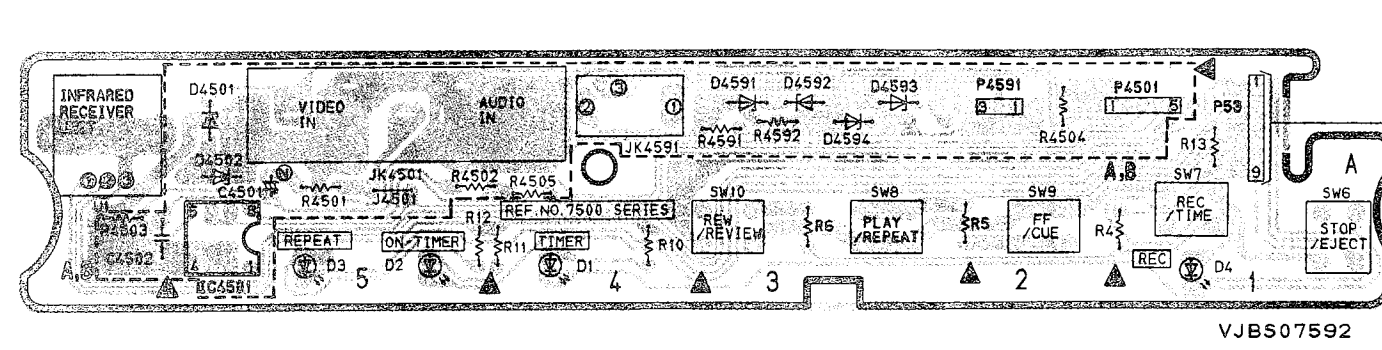
MAIN	
TRANSISTOR	
Q1051	A-2
Q1052	A-2
Q1250	G-1
Q1252	F-1
Q1253	G-1
Q3002	E-4
Q3003	E-3
Q3005	E-3
Q3301	F-1
Q3310	F-2
Q3311	F-1
Q3312	E-2
Q3313	E-2
Q3314	E-2
Q3315	E-2
Q4001	D-4
Q4002	D-4
Q4003	D-4
Q4005	A-4
Q4006	A-3
Q4101	D-4
Q4301	A-3
Q4302	B-3
Q4303	B-2
Q5301	G-4
Q5302	G-4
Q5901	G-2
Q5951	G-2
Q6001	E-2
Q6002	D-2
Q6003	D-2
Q6005	C-1
Q6006	C-1
Q6007	C-1
Q6008	C-1
Q6009	G-2
Q6010	B-2
Q6303	E-1

MAIN	
IC	
IC3001	E-3
IC3002	E-3
IC3201	F-3

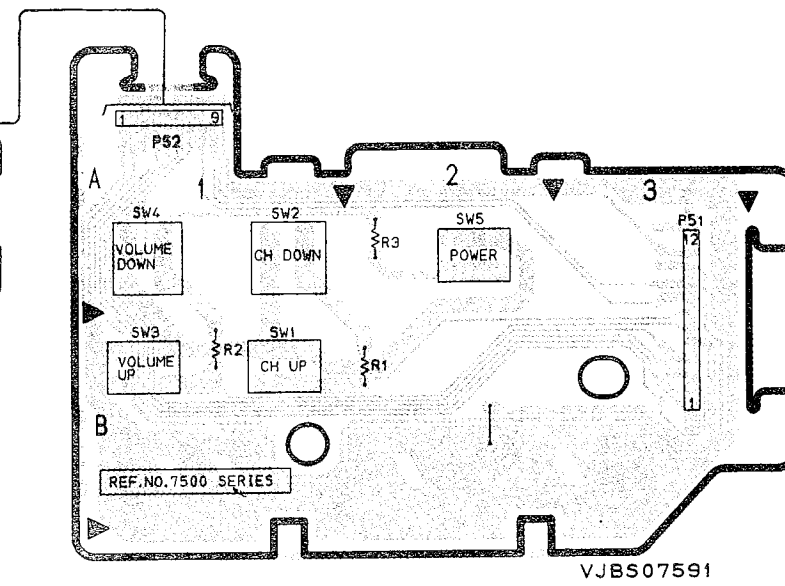


# OPERATION III C.B.A.

OPERATION II C.B.A. VEPS07592C1 (A,B)  
/VEPS07592A1 (C,D,E)

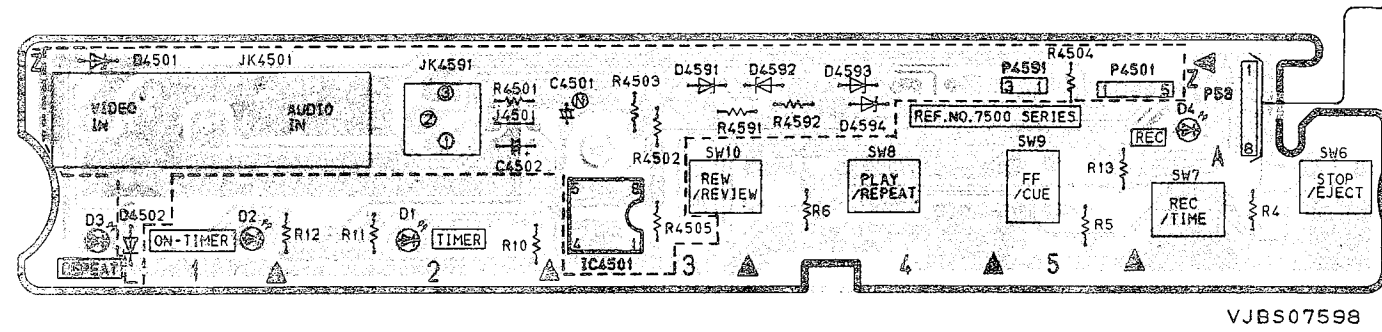


OPERATION I C.B.A. VEPS07591A1 (A,B,C,D,E)

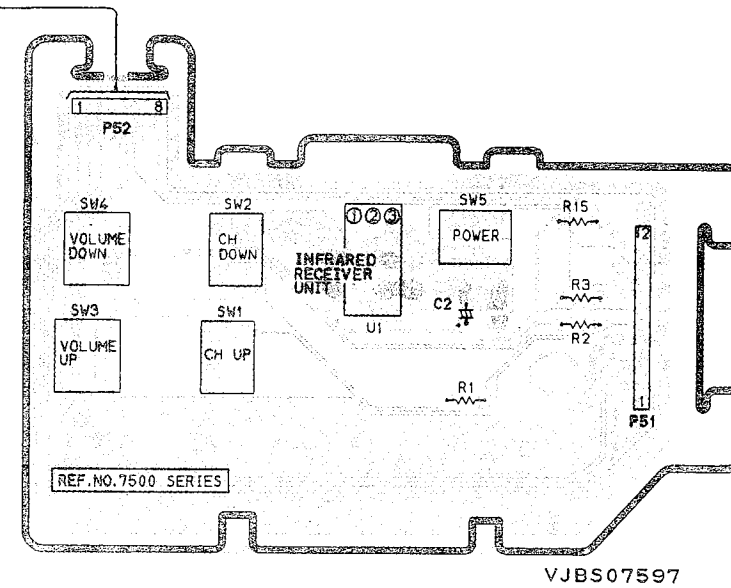


# OPERATION III C.B.A. (F,G)

OPERATION II C.B.A. VEPS07598B1



OPERATION I C.B.A. VEPS07597A1



# OPERATION I/II C.B.A (H,K,L)

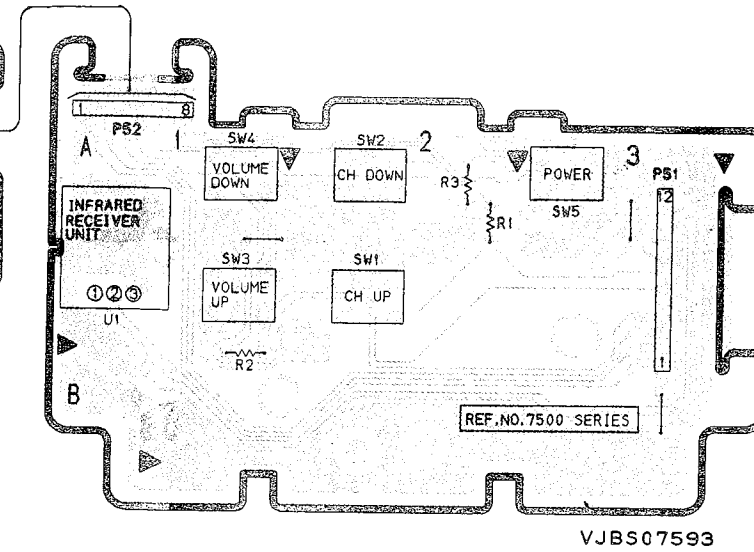
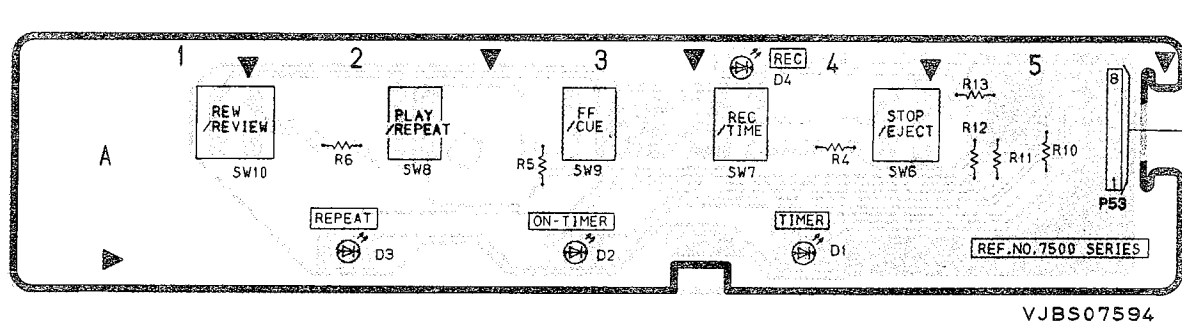
OPERATION II C.B.A. VEPS07594A1

NOTE:  
FOR SCHEMATIC AND C.B.A. DIAGRAM NOTES,  
REFER TO BEGINNING OF SCHEMATIC SECTION (SECTION III).

OPERATION I C.B.A. VEPS07593A1

COMPARISON CHART  
OF MODELS & MARKS

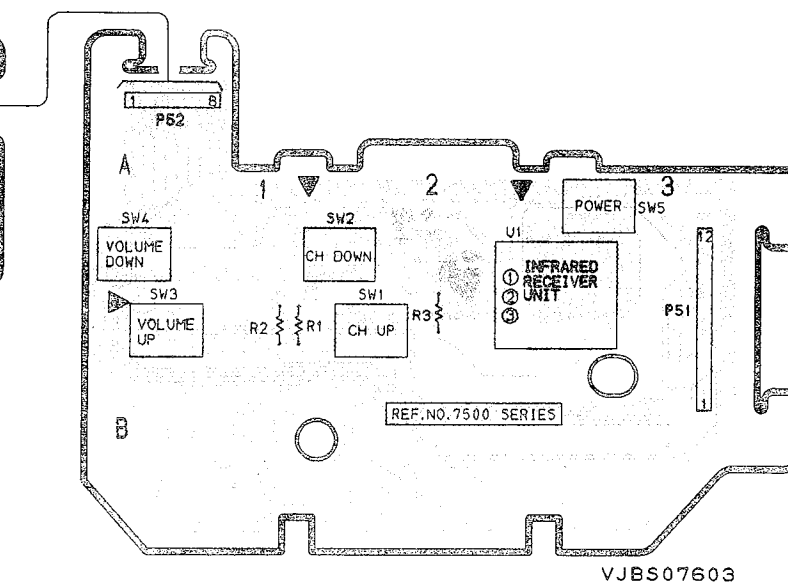
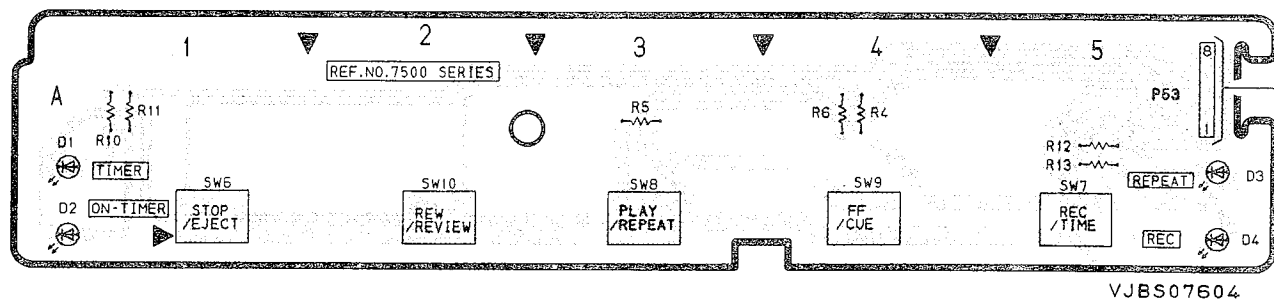
MODEL	MARK
PV-M1326	A
PV-M1326W	B
VV1306	C
VV1306B	D
VV1316W	E
PV-M1346	F
PV-M1356W	G
PV-M2036	H
VV2006	I
VV2016W	J
PV-M2046	K
VV2706	L
NOT USED	Z



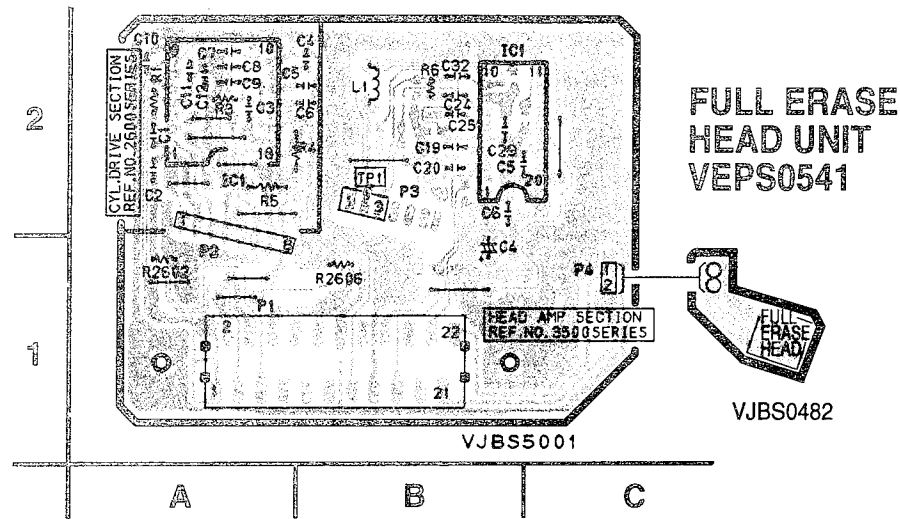
# OPERATION I/II C.B.A (I,J)

OPERATION II C.B.A. VEPS07604A1

OPERATION I C.B.A. VEPS07603A1



# HEAD AMP C.B.A. VEPS5001CA1 (A,B,C,D,E,H,I,J,L)



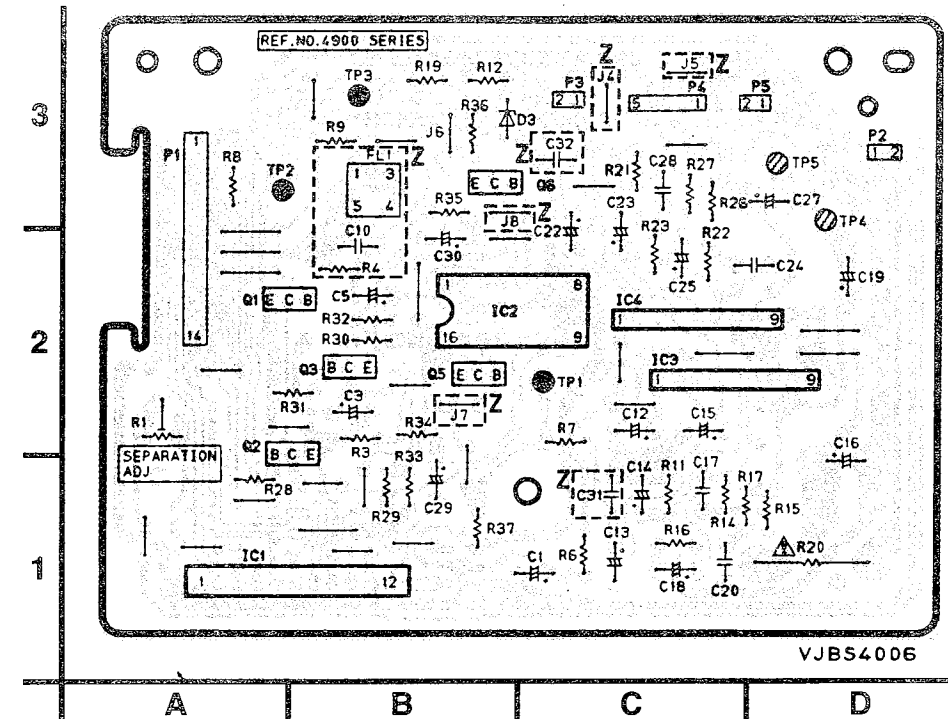
HEAD AMP	
IC	
IC2601	A-2
IC3501	B-2
CONNECTOR	
P3501	A-1
P3502	A-1
P3503	B-2
P3504	C-1
TEST POINT	
TP3501	B-2

### LEADLESS COMPONENT PARTS LOCATION GUIDE

#### HEAD AMP C.B.A.

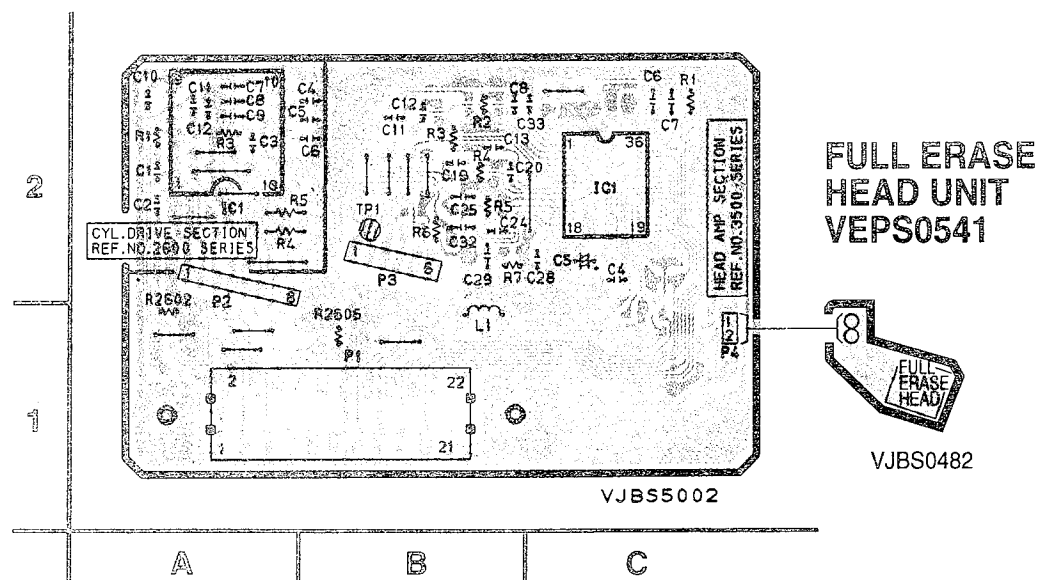
R2601	A-2	C2605	A-2	C3506	B-2
R2602	A-1	C2606	B-2	C3519	B-2
R2603	A-2	C2607	A-2	C3520	B-2
R2606	B-1	C2608	A-2	C3524	B-2
R3506	B-2	C2609	A-2	C3525	B-2
C2601	A-2	C2610	A-2	C3529	B-2
C2602	A-2	C2611	A-2	C3532	B-2
C2603	A-2	C2612	A-2		
C2604	B-2	C3505	B-2		

# TV STEREO AMP C B A. VEPS4006A1 (K)



TV STEREO	
TRANSISTOR	
Q4901	A-2
Q4902	A-2
Q4903	B-2
Q4905	B-2
Q4906	C-3
IC	
IC4901	A-1
IC4902	B-2
IC4903	C-2
IC4904	C-2
CONNECTOR	
P4901	A-3
P4902	D-3
P4903	C-3
P4904	C-3
P4905	C-3
TEST POINT	
TP4901	C-2
TP4902	A-3
TP4903	B-3
TP4904	D-2
TP4905	C-3
ADJUSTMENT	
R4901	A-2

# HEAD AMP C.B.A. VEPS5002CA1 (F,G,K)



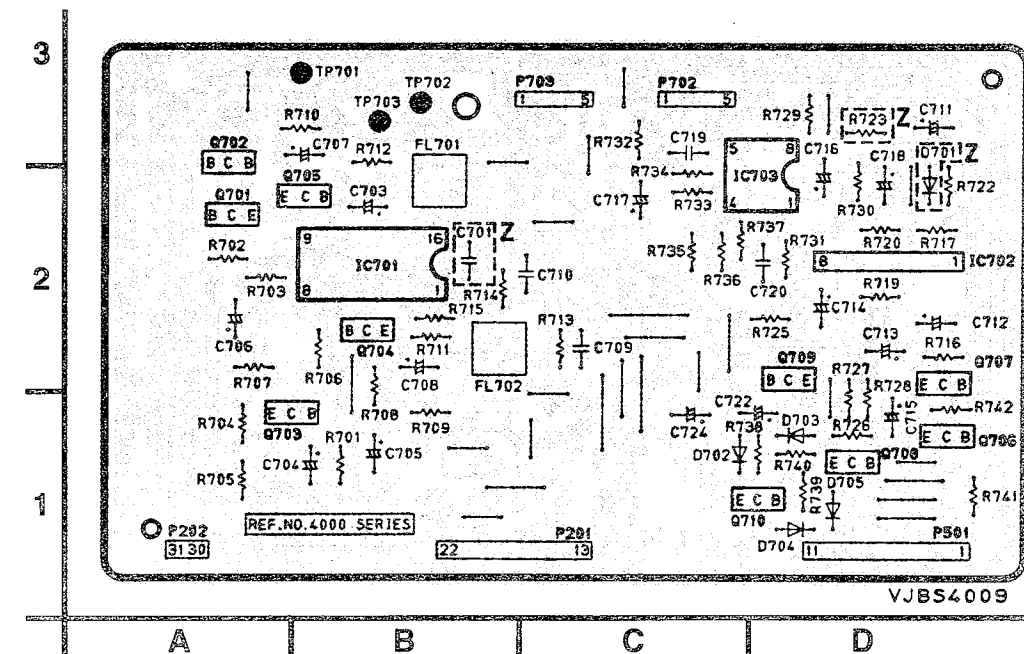
HEAD AMP	
IC	
IC2601	A-2
IC3501	C-2
CONNECTOR	
P3501	B-1
P3502	A-1
P3503	B-2
P3504	C-1
TEST POINT	
TP3501	B-2

### LEADLESS COMPONENT PARTS LOCATION GUIDE

#### HEAD AMP C.B.A.

R2601	A-2	C2603	A-2	C3508	B-2
R2602	A-2	C2604	B-2	C3511	B-2
R2603	A-2	C2605	B-2	C3512	B-2
R2606	B-1	C2606	B-2	C3513	B-2
R3501	C-2	C2607	A-2	C3519	B-2
R3502	B-2	C2608	A-2	C3520	B-2
R3503	B-2	C2609	A-2	C3524	B-2
R3504	B-2	C2610	A-2	C3525	B-2
R3505	B-2	C2611	A-2	C3528	C-2
R3506	B-2	C2612	A-2	C3529	B-2
R3507	B-2	C3504	C-2	C3532	B-2
C2601	A-2	C3506	C-2	C3533	C-2
C2602	A-2	C3507	C-2		

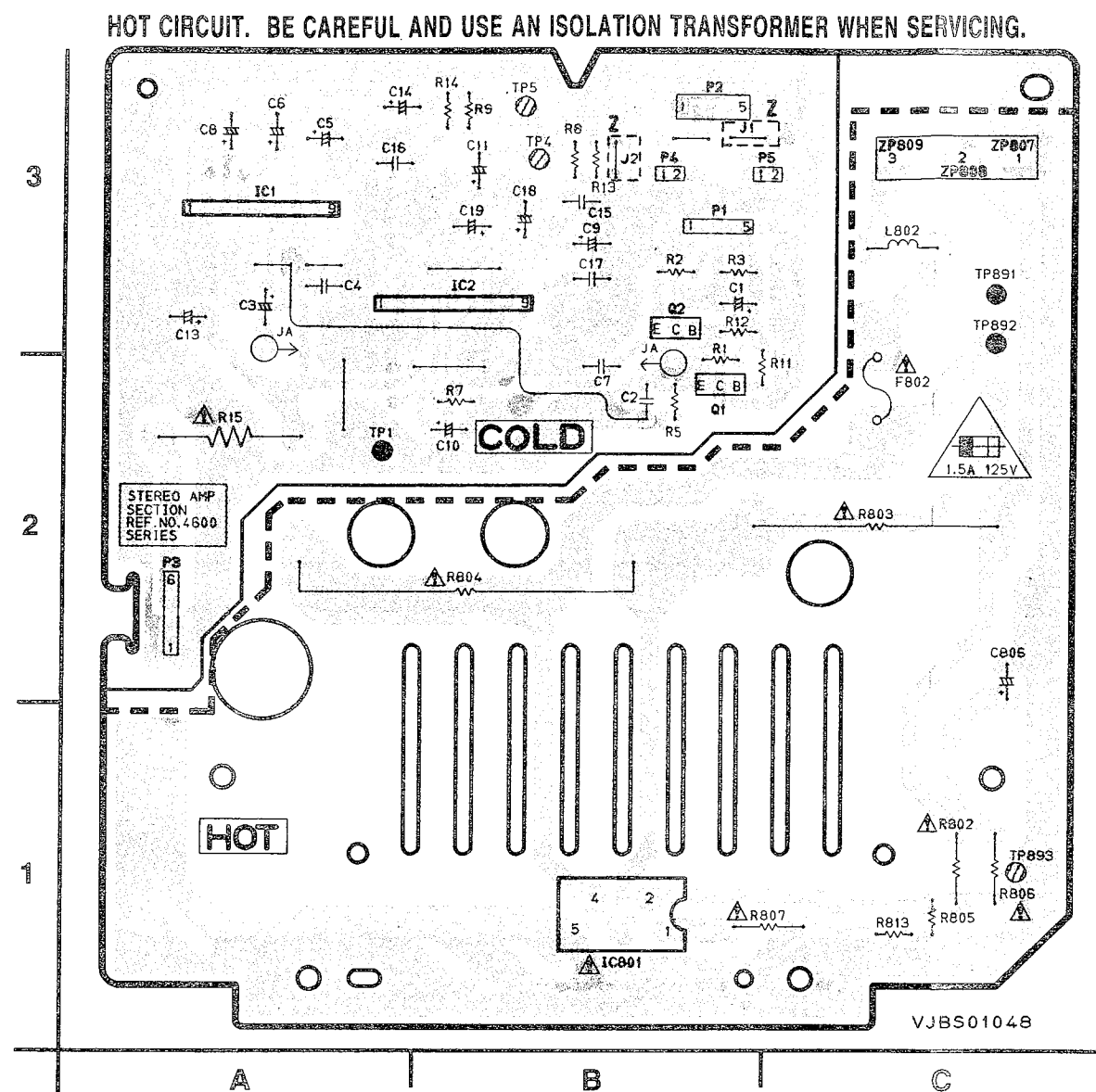
# TV STEREO C.B.A. VEPS4009A1 (L)



TV STEREO	
TRANSISTOR	
Q4701	A-2
Q4702	A-3
Q4703	A-1
Q4704	B-2
Q4705	B-2
Q4706	D-1
Q4707	D-2
Q4708	D-1
Q4709	D-2
Q4710	D-1
IC	
IC4701	B-2
IC4702	D-2
IC4703	D-3
CONNECTOR	
P4201	C-1
P4202	A-1
P4501	D-1
P4702	C-3
P4703	C-3
TEST POINT	
TP4701	B-3
TP4702	B-3
TP4703	B-3

NOTE:  
FOR SCHEMATIC AND C.B.A. DIAGRAM NOTES,  
REFER TO BEGINNING OF SCHEMATIC SECTION (SECTION III).

# STEREO AMP / TV AVR C.B.A. VEPS01048C1 (L)

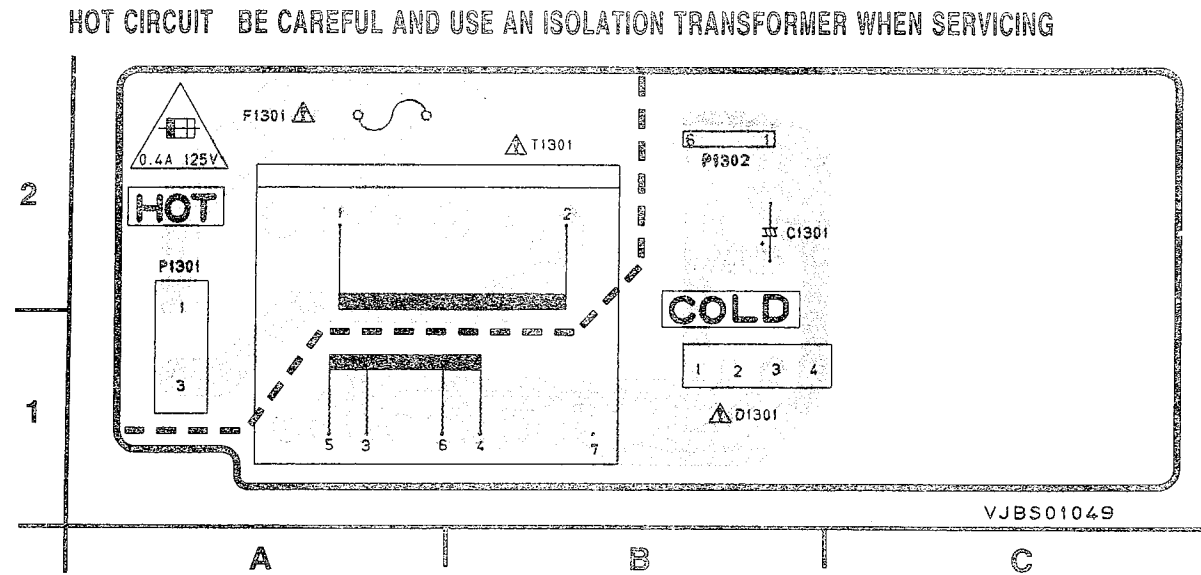


STEREO AMP/TV AVR	
TRANSISTOR	
Q4601	B-2
Q4602	B-3
CONNECTOR	
P4601	B-3
P4602	B-3
P4603	A-2
P4604	B-3
P4605	B-3
ZP807	C-3
ZP808	C-3
ZP809	C-3

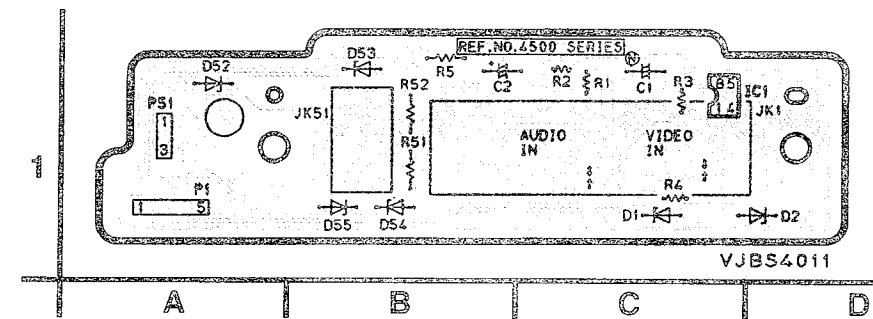
STEREO AMP/TV AVR	
IC	
IC4601	A-3
IC4602	B-3
IC801	B-1
TEST POINT	
TP4601	A-2
TP4604	B-3
TP4605	B-3
TP891	C-3
TP892	C-3
TP893	C-1

IMPORTANT SAFETY NOTICE:  
COMPONENTS IDENTIFIED BY THE SIGN HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SPECIFIED PARTS.

# POWER AMP C.B.A. VEPS01049A1 (L)



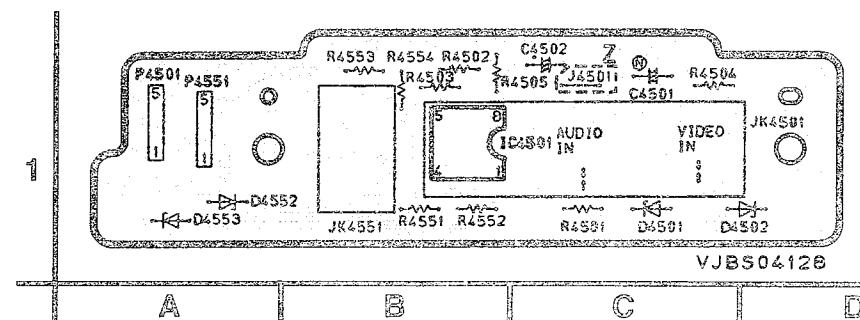
# AUDIO/VIDEO JACK C.B.A. VEPS4011A1 (H)



COMPARISON CHART OF MODELS & MARKS

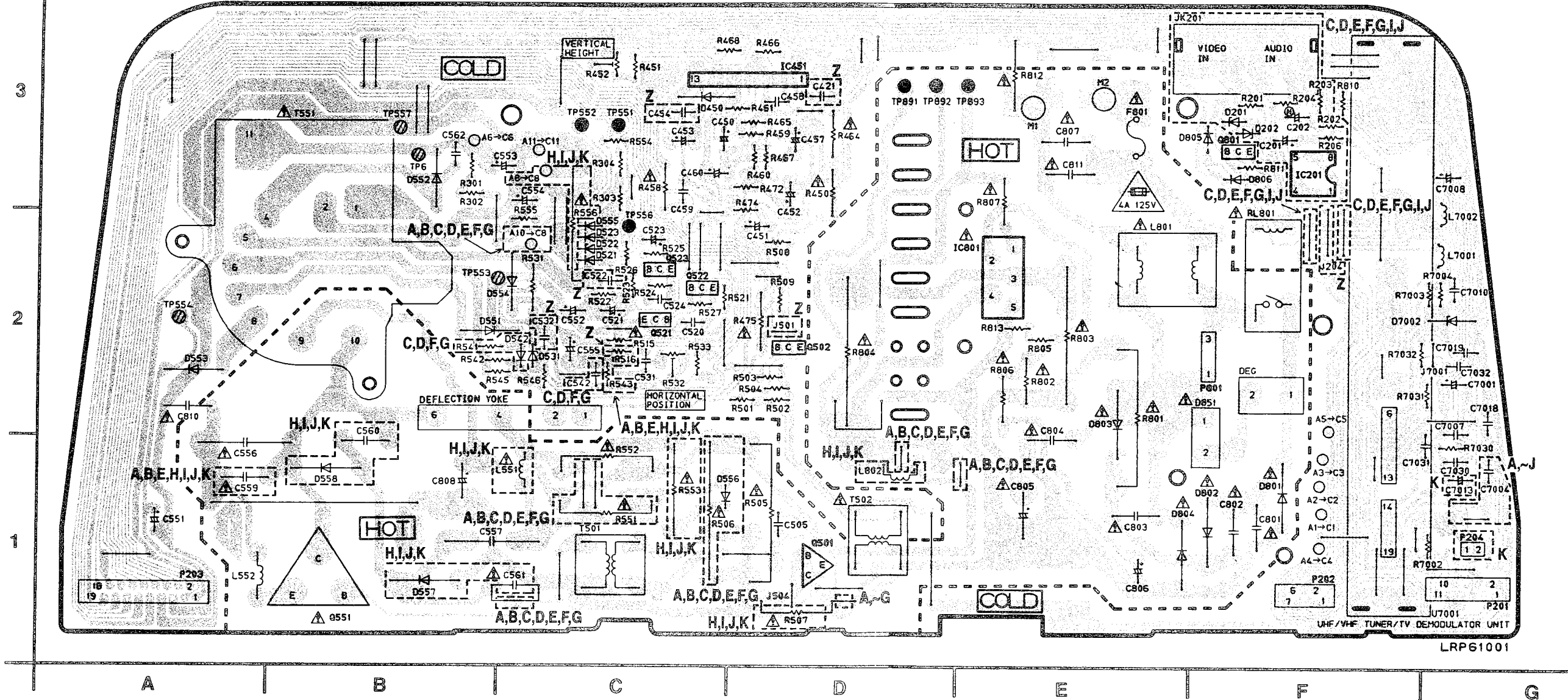
MODEL	MARK
PV-M1326	A
PV-M1326W	B
VV1306	C
VV1306B	D
VV1316W	E
PV-M1346	F
PV-M1356W	G
PV-M2036	H
VV2006	I
VV2016W	J
PV-M2046	K
VV2706	L
NOT USED	Z

# AUDIO/VIDEO JACK C.B.A. VEPS04128C1 (K) /VEPS04128D1 (L)



TV MAIN C.B.A. LRM61001YZ (A)/LRM61001YA (B)/LRM61001ZZ (C,F)/LRM61001XZ (D)  
 /LRM61001XA (E)/LRM61001ZA (G)/LRM61001BZ (H)/LRM61001GZ (I)  
 /LRM61001GA (J)/LRM61001AZ (K)

HOT CIRCUIT BE CAREFUL AND USE AN ISOLATION TRANSFORMER WHEN SERVICING



COMPARISON CHART OF MODELS & MARKS

MODEL	MARK
PV-M1326	A
PV-M1326W	B
VV1306	C
VV1306B	D
VV1316W	E
PV-M1346	F
PV-M1356W	G
PV-M2036	H
VV2006	I
VV2016W	J
PV-M2046	K
VV2706	L
NOT USED	Z

TV MAIN	
TRANSISTOR	
Q501	D-1
Q502	D-2
Q521	C-2
Q522	C-2
Q523	C-2
Q551	B-1
Q801	F-3
IC	
IC201	F-3
IC451	D-3
IC801	E-2

TV MAIN	
CONNECTOR	
A1	F-1
A2	F-1
A3	F-1
A4	F-1
A5	F-2
A6	B-3
A8	C-3
A11	C-3
P201	G-1
P202	F-1
P203	A-1
P204	G-1
P801	F-2

TV MAIN	
TEST POINT	
TP6	B-3
TP551	C-3
TP552	C-3
TP553	B-2
TP554	A-2
TP556	C-2
TP557	B-3
TP891	D-3
TP892	D-3
TP893	E-3
ADJUSTMENT	
R452	C-3
R532	C-2

NOTE:  
 FOR SCHEMATIC AND C.B.A. DIAGRAM  
 REFER TO BEGINNING OF SCHEMATIC

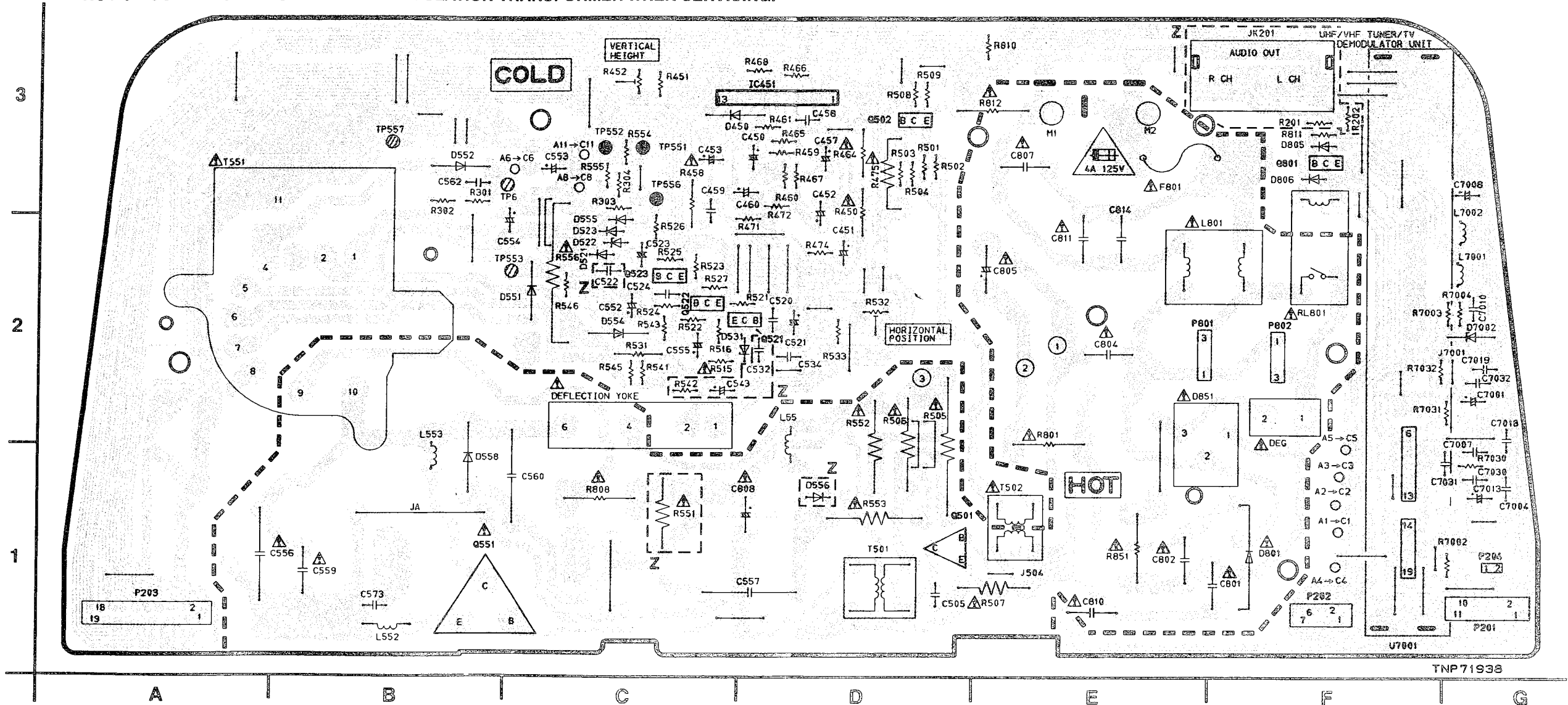
IMPORTANT SAFETY NOTICE:  
 COMPONENTS IDENTIFIED BY THE  
 SPECIAL CHARACTERISTICS IMPOR  
 WHEN REPLACING ANY OF THESE C  
 USE ONLY THE SPECIFIED PARTS.

# TV MAIN C.B.A. VEBS0254B1 (L)


HOT CIRCUIT. BE CAREFUL AND USE AN ISOLATION TRANSFORMER WHEN SERVICING.

COMPARISON CHART OF MODELS & MARKS

MODEL	MARK
PV-M1326	A
PV-M1326W	B
VV1306	C
VV1306B	D
VV1316W	E
PV-M1346	F
PV-M1356W	G
PV-M2036	H
VV2006	I
VV2016W	J
PV-M2046	K
VV2706	L
NOT USED	Z



NOTE:  
FOR SCHEMATIC AND C.B.A. DIAGRAM NOTES,  
REFER TO BEGINNING OF SCHEMATIC SECTION (SECTION III).

IMPORTANT SAFETY NOTICE:  
COMPONENTS IDENTIFIED BY THE SIGN  HAVE  
SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY.  
WHEN REPLACING ANY OF THESE COMPONENTS,  
USE ONLY THE SPECIFIED PARTS.

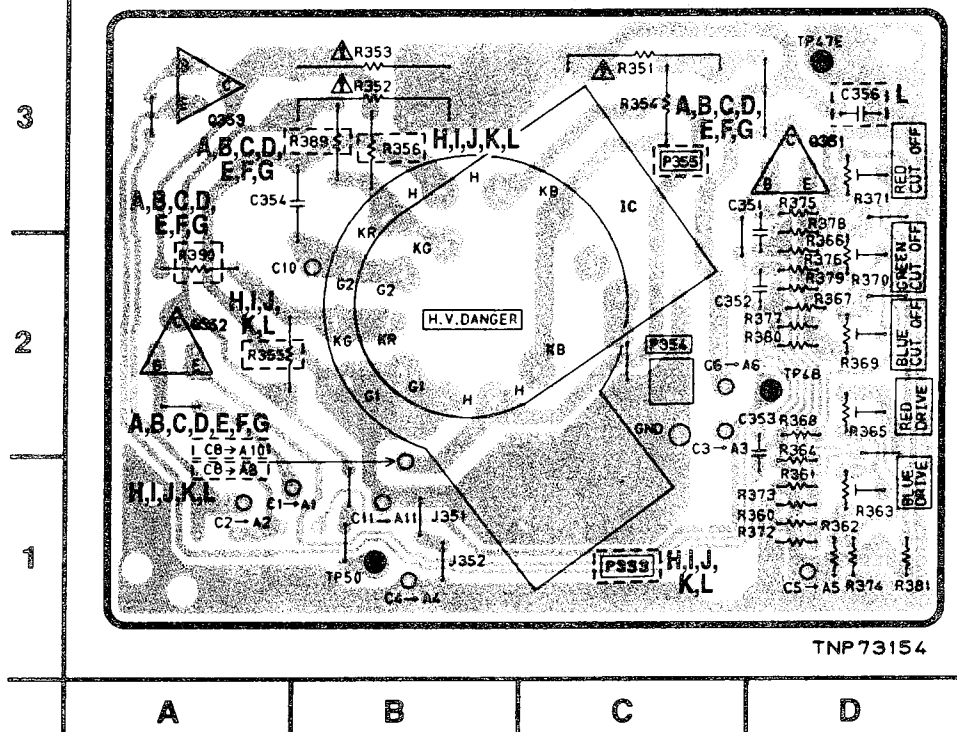
TV MAIN	
TRANSISTOR	
Q501	D-1
Q502	D-3
Q521	D-2
Q522	C-2
Q523	C-2
Q551	B-1
Q801	F-3
IC	
IC451	C-3

TV MAIN	
CONNECTOR	
A1	F-1
A2	F-1
A3	F-1
A4	F-1
A5	F-2
A6	C-3
A8	C-3
A11	C-3
P201	G-1
P202	F-1
P203	A-1
P204	G-1
P801	E-2
P802	F-2

TV MAIN	
TEST POINT	
TP6	B-3
TP551	C-3
TP552	C-3
TP553	B-2
TP556	C-3
TP557	B-3
ADJUSTMENT	
R452	C-2
R532	D-2

# CRT C.B.A. TNP73154EE (A,B,C,D,E,F,G) /TNP73154FF (H,I,J,K) /TNP73154GG (L)

CAUTION: WHEN SERVICING THIS C.B.A. , AVOID TOUCHING HIGH VOLTAGE COMPONENTS



CRT	
TRANSISTOR	
Q351	D-3
Q352	A-2
Q353	A-3
CONNECTOR	
C1	A-1
C2	A-1
C3	C-2
C4	B-1
C5	D-1
C6	C-2
C8	B-1
C10	A-2
C11	B-1
P353	C-1
P354	C-2
P355	C-3
TEST POINT	
TP47E	D-3
TP48	D-2
TP50	B-1
ADJUSTMENT	
R363	D-1
R365	D-2
R369	D-2
R370	D-2
R371	D-3

NOTE:  
FOR SCHEMATIC AND C.B.A. DIAGRAM NOTES,  
REFER TO BEGINNING OF SCHEMATIC SECTION (SECTION III).

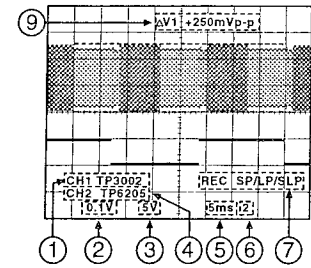
IMPORTANT SAFETY NOTICE:  
COMPONENTS IDENTIFIED BY THE SIGN  $\triangle$  HAVE  
SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY.  
WHEN REPLACING ANY OF THESE COMPONENTS,  
USE ONLY THE SPECIFIED PARTS.

## COMPARISON CHART OF MODELS & MARKS

MODEL	MARK
PV-M1326	A
PV-M1326W	B
VV1306	C
VV1306B	D
VV1316W	E
PV-M1346	F
PV-M1356W	G
PV-M2036	H
VV2006	I
VV2016W	J
PV-M2046	K
VV2706	L
NOT USED	Z

# SIGNAL WAVEFORM

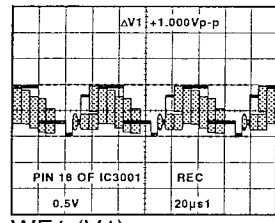
## How to Read Waveforms



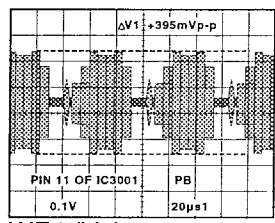
**WF1** — ⑧

- ① Connecting Point
- ② Volts/Div
- ③ Volts/Div
- ④ Connecting Point
- ⑤ Time/Div
- ⑥ Trigger Channel of the scope (1:CH1,2:CH2)
- ⑦ Operation Mode of VCR
- ⑧ Waveform Point on Schematic
- ⑨ V1:Peak to Peak

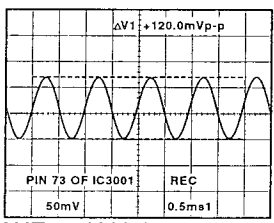
### MAIN C.B.A.



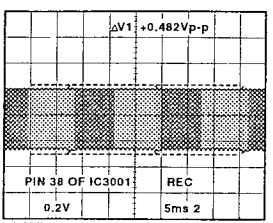
WF1 (V1)



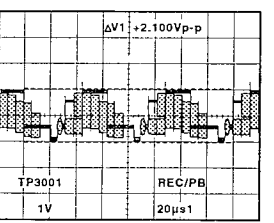
WF7 (V7)



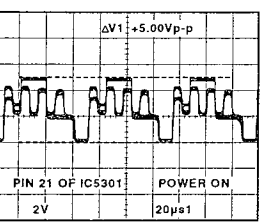
WF13 (AU2)



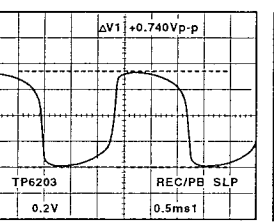
WF20



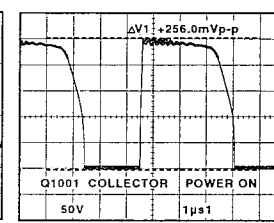
WF26



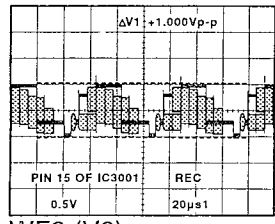
WF31



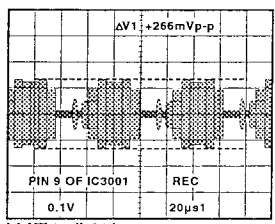
WF36



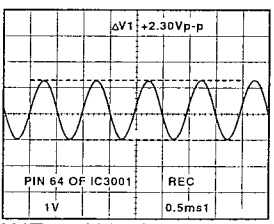
WF40



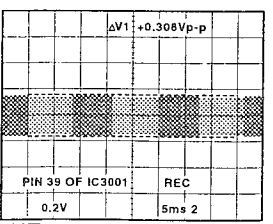
WF2 (V2)



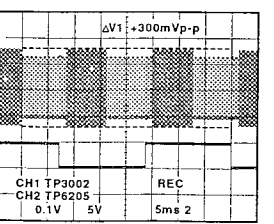
WF8 (V8)



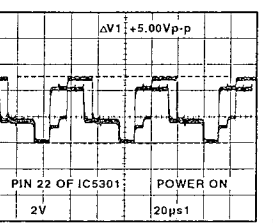
WF14 (AU3)



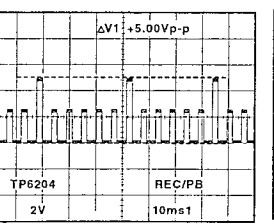
WF21



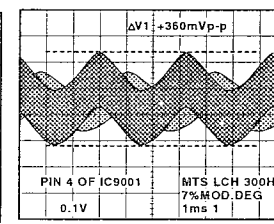
CH1 WF27  
CH2 WF38



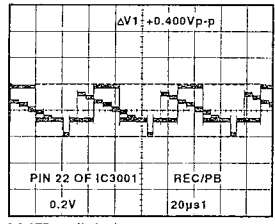
WF32



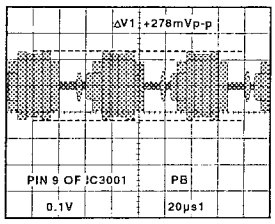
WF37



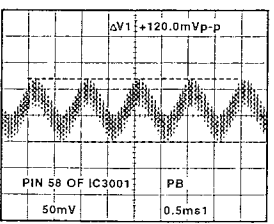
WF41



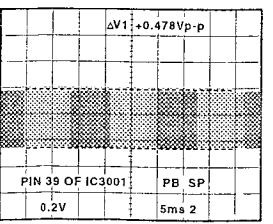
WF3 (V3)



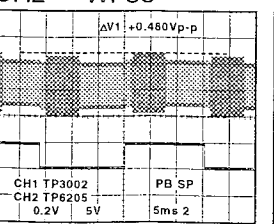
WF8 (V8)



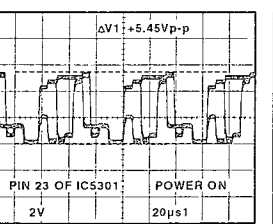
WF15 (AU4)



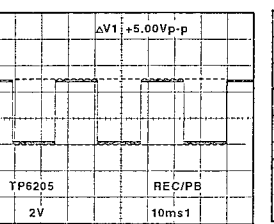
WF21



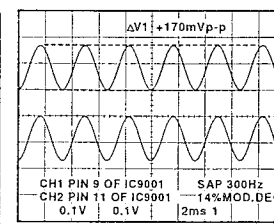
CH1 WF27  
CH2 WF38



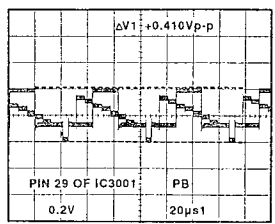
WF33



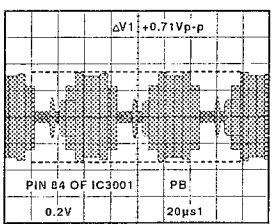
WF38



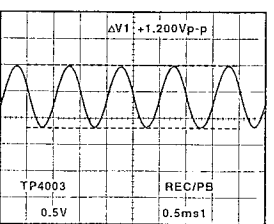
CH1 WF42  
CH2 WF43



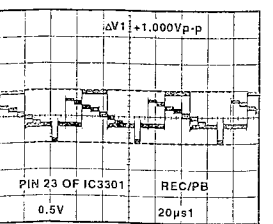
WF4 (V4)



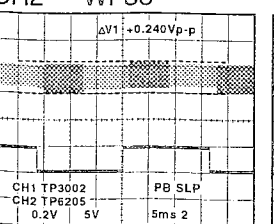
WF9 (V9)



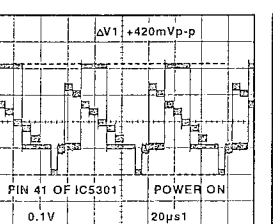
WF16



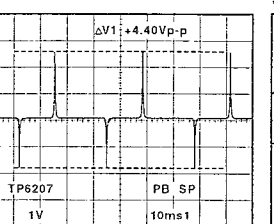
WF22



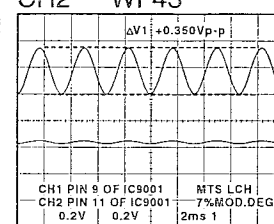
CH1 WF27  
CH2 WF38



WF34

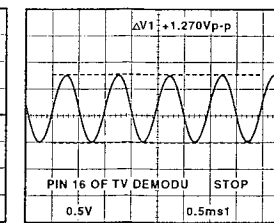


WF39

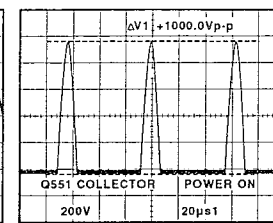


CH1 WF42  
CH2 WF43

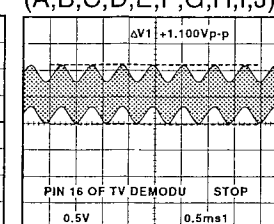
### UHF/VHF TUNER/TV DEMODULATOR UNIT



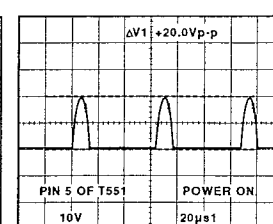
WF44 (A,B,C,D,E,F,G,H,I,J)



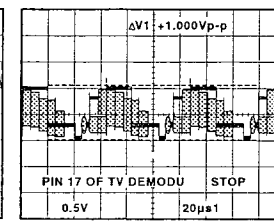
WF49



WF44 (K,L)



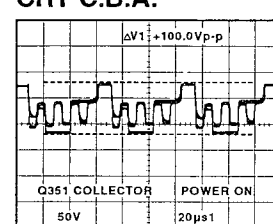
WF50



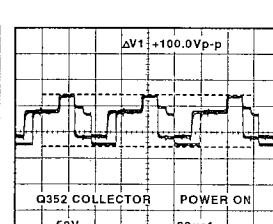
WF45



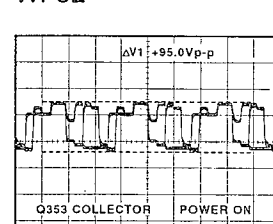
CH1 V  
CH2 V



CH1 V  
CH2 V



CH1 V  
CH2 V



CH1 V  
CH2 V

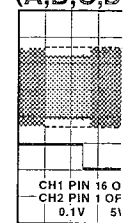


CH1 V  
CH2 V

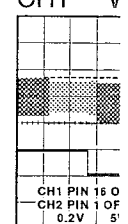


CH1 V  
CH2 V

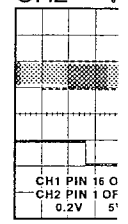
### HEAD A (A,B,C,D)



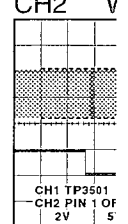
CH1 V  
CH2 V



CH1 V  
CH2 V



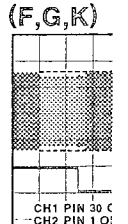
CH1 V  
CH2 V



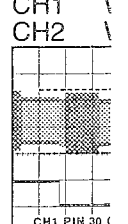
CH1 V  
CH2 V



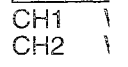
CH1 V  
CH2 V



CH1 V  
CH2 V

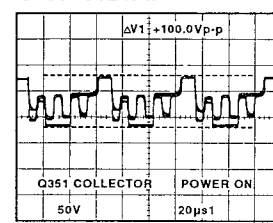


CH1 V  
CH2 V



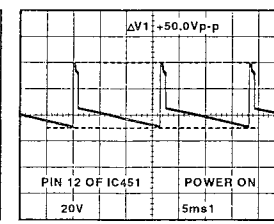
CH1 V  
CH2 V

### CRT C.B.A.

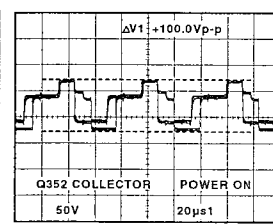


WF51

### TV MAIN C.B.A.

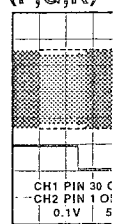


WF46



WF52

### HEAD A (F,G,K)



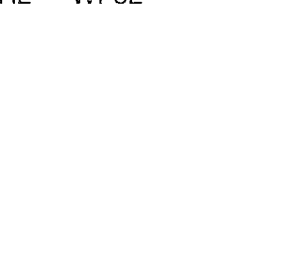
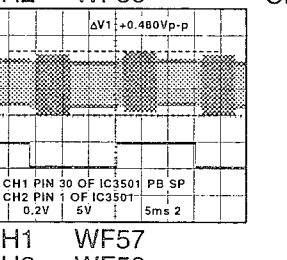
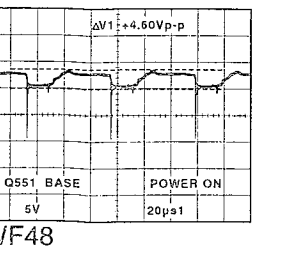
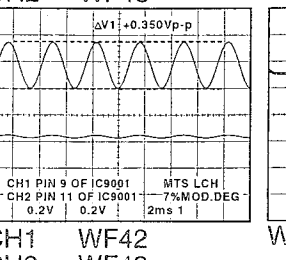
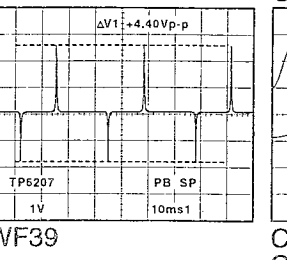
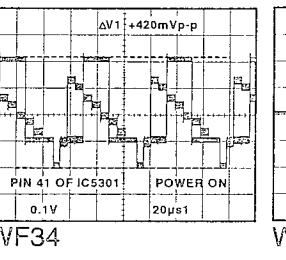
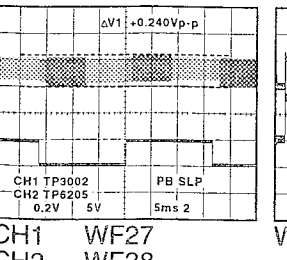
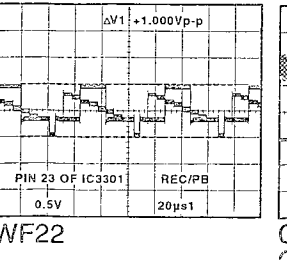
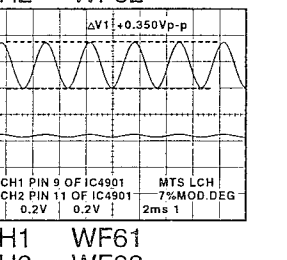
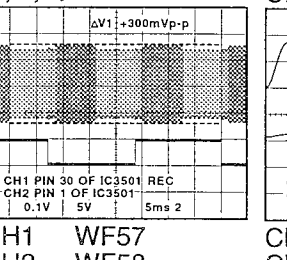
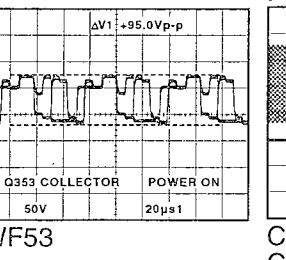
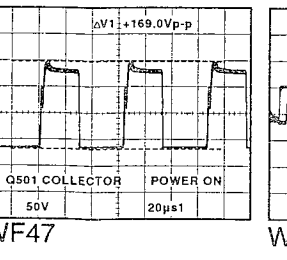
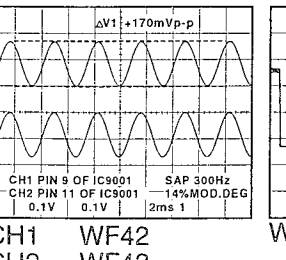
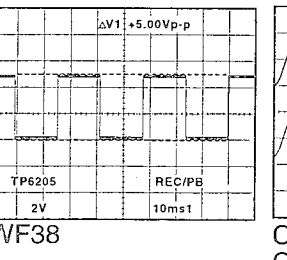
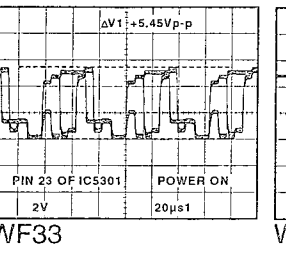
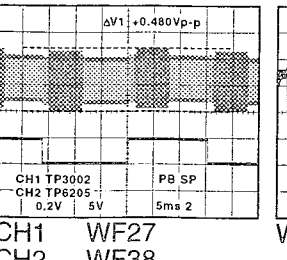
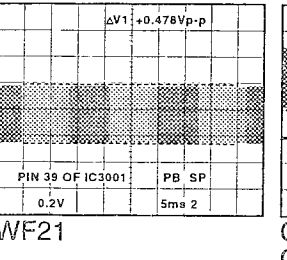
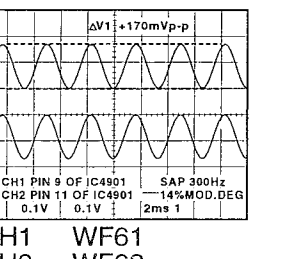
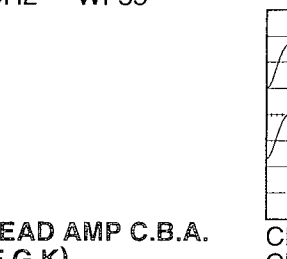
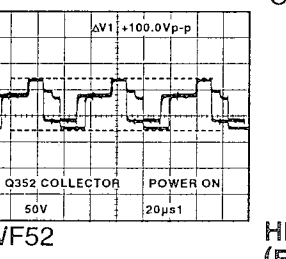
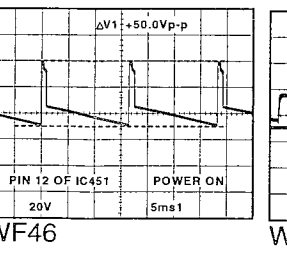
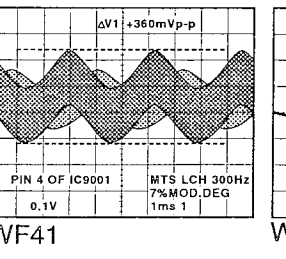
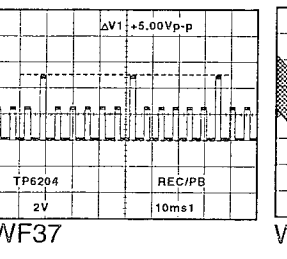
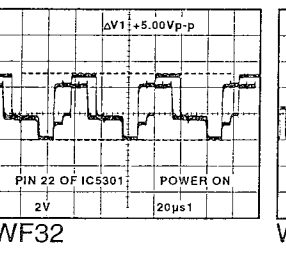
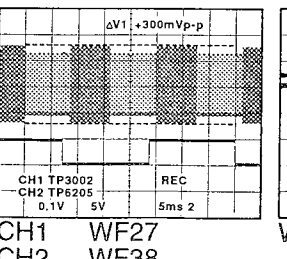
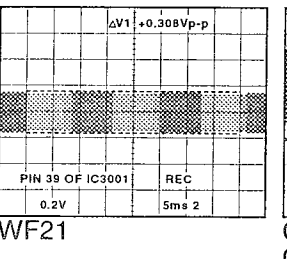
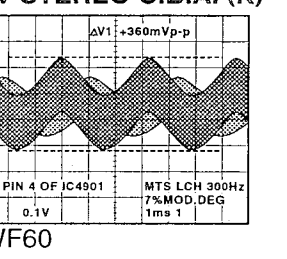
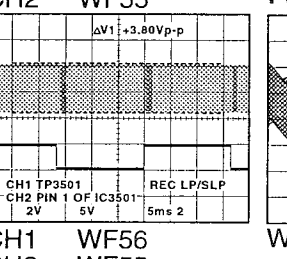
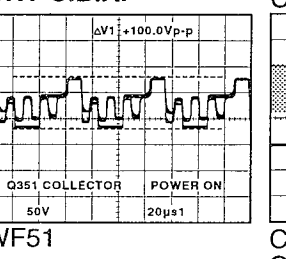
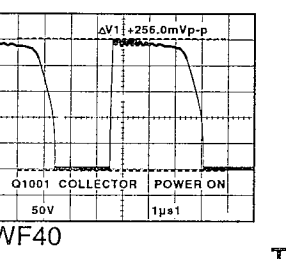
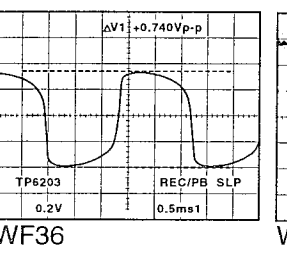
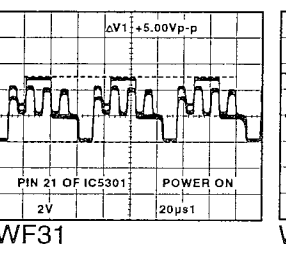
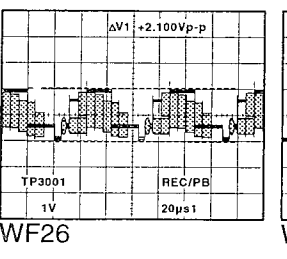
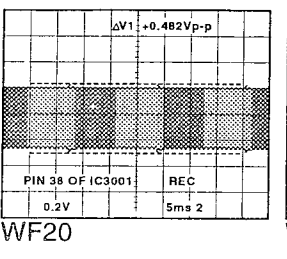
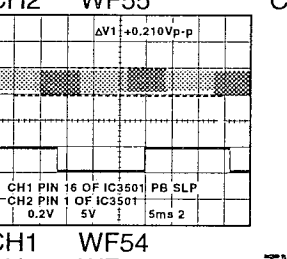
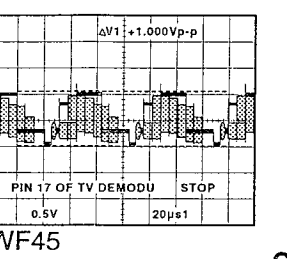
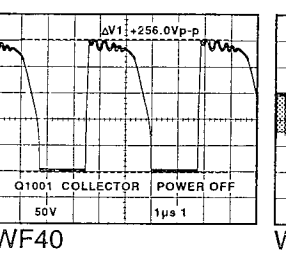
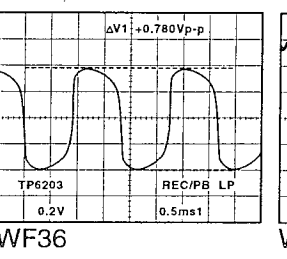
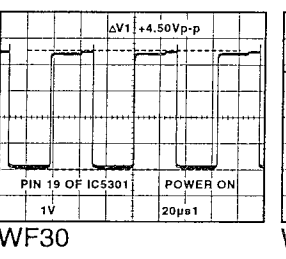
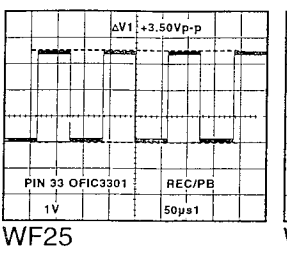
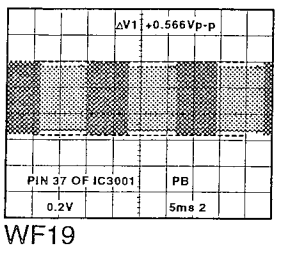
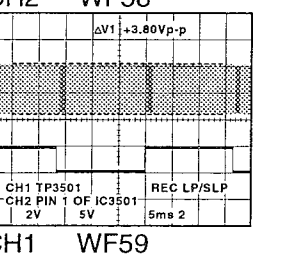
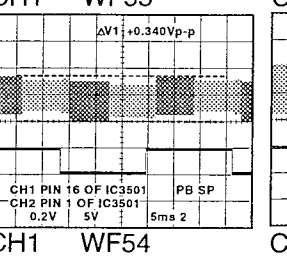
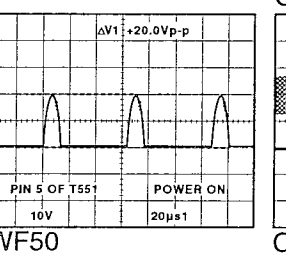
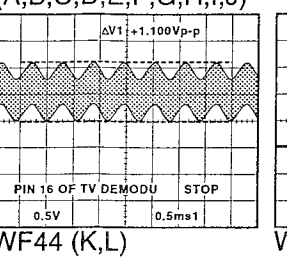
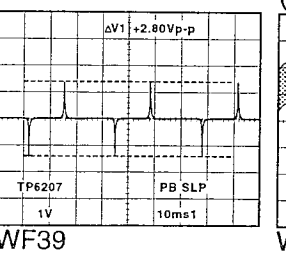
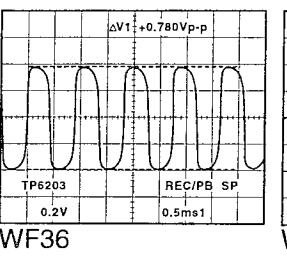
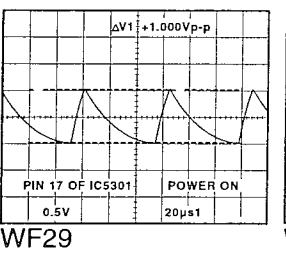
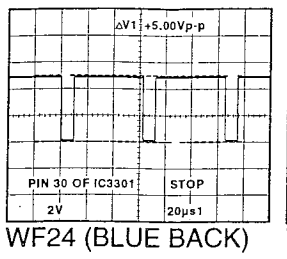
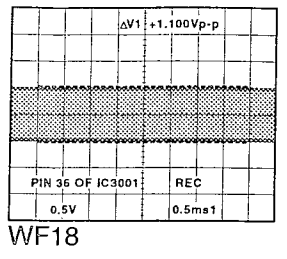
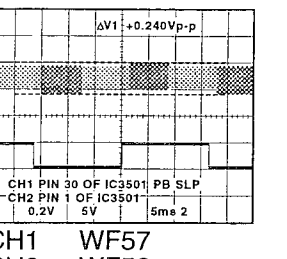
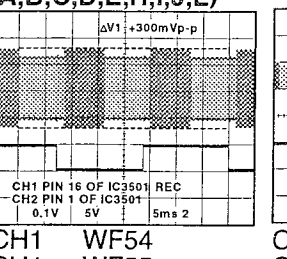
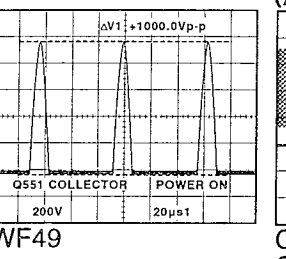
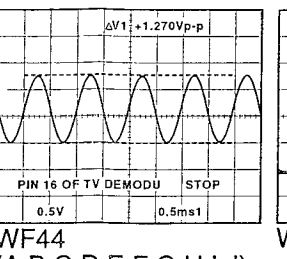
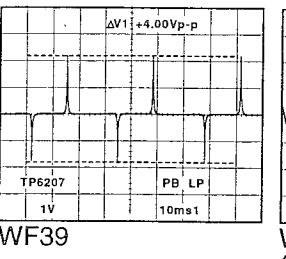
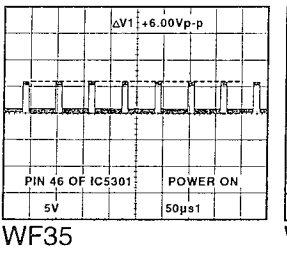
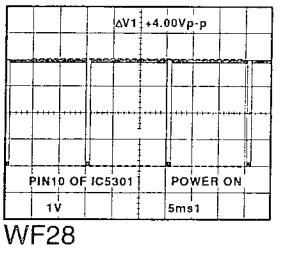
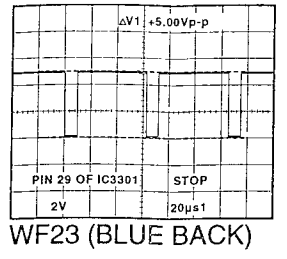
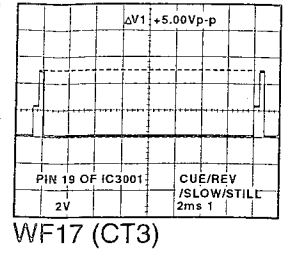
CH1 V  
CH2 V



**UHF/VHF TUNER/TV DEMODULATOR UNIT**

**HEAD AMP C.B.A. (A,B,C,D,E,H,I,J,L)**

p-p  
C/PB  
s1  
v-p-p  
p  
f-p-p  
p  
PB  
s1



**TV MAIN C.B.A.**

**CRT C.B.A.**

**TV STEREO C.B.A. (K)**

**HEAD AMP C.B.A. (F,G,K)**

# VOLTAGE CHART (SYSTEM CONTROL/SERVO)

NOTE:  
FOR SCHEMATIC AND C.B.A. DIAGRAM NOTES,  
REFER TO BEGINNING OF SCHEMATIC SECTION (SECTION III).

MODE PIN NO.	STOP	FF	REW
IC2501			
1	2.8	4.0	3.8
2	13.3	13.3	13.3
3	13.2	12.8	12.8
4	13.2	12.8	12.8
5	13.2	12.8	12.8
6	---	---	---
7	0.7	0.7	0.7
8	0	0	0
9	0.1	0.7	0.7
10	0	0.2	0.2
11	0.5	0.5	0.5
12	---	---	---
13	3.2	3.2	3.2
14	5.1	5.1	5.1
15	1.1	2.4	2.4
16	2.6	2.6	2.6
17	2.7	0.1	5.0
18	1.8	1.8	1.8
19	1.6	1.6	1.6
20	1.6	1.6	1.6
21	1.6	1.6	1.6
22	1.6	1.6	1.6
23	1.6	1.6	1.6
24	1.6	1.6	1.6
25	---	---	---
26	2.8	4.1	5.4
27	0	0.2	0.2
28	2.8	4.0	5.4
IC2502			
1	13.2	12.8	12.8
2	2.8	4.0	5.4
3	13.5	13.2	13.2
4	13.3	13.3	13.3
5	2.8	4.1	5.4
6	13.3	13.3	13.3
7	13.2	12.8	12.8
8	2.8	4.0	3.8
IC2601			
1	13.3	13.0	13.0
2	13.3	13.0	13.0
3	0.1	0.1	0.1
4	0.6	0.6	0.6
5	0	0	0
6	2.7	2.7	2.7
7	2.6	2.6	2.6
8	3.0	9.0	9.0
9	9.0	2.9	2.9
10	2.9	2.9	2.9
11	5.2	5.2	5.2
12	3.9	3.9	3.9
13	3.9	3.9	3.9
14	3.9	3.9	3.9
15	1.2	1.2	1.2
16	13.5	13.3	13.3
17	13.3	13.0	13.0
18	0.1	0.1	0.1

MODE PIN NO.	STOP	FF	REW
IC6001			
1	0	0	0
(A,B,C,D,E,F,G,H,I,J)			
1	5.1	5.1	5.1
(K)			
2	0	0	0
3	5.1	5.1	5.1
(A,B,C,D,E,I,J)			
3	0	0	0
(F,G,H,K)			
4	0.3	0.3	0.3
5	0	0	0
6	---	---	---
7	0	0	0
8	0	0	0
9	0	0	0
10	0	0	0
11	5.1	5.1	5.1
12	5.1	5.1	5.1
13	0.8	0.8	0.8
14	5.1	5.1	5.1
15	5.1	5.1	5.1
16	4.9	4.9	4.9
17	5.1	5.1	5.1
18	4.9	4.9	4.9
19	5.0	5.0	5.0
20	0	0	0
21	2.6	2.6	2.6
22	0	0	0
23	2.6	2.6	2.6
24	0	2.6	2.6
25	1.9	2.6	2.6
26	2.6	2.6	2.6
27	4.1	4.1	4.1
28	1.3	3.0	3.0
29	5.1	5.1	5.1
30	5.1	5.1	5.1
31	0	0	0
32	5.1	5.1	5.1
33	0	0	0
34	2.6	2.6	2.6
35	2.6	2.6	2.6
36	0.1	0.1	0.1
37	0	0	0
38	0	0	0
39	---	---	---
40	---	---	---
(A,B,C,D,E,H,I,J,L)			
40	5.1	1.9	1.9
(F,G,H)			
41	1.1	2.4	2.4
42	2.6	0	5.0
43	5.0	5.0	5.0
44	2.6	2.6	2.6
45	2.6	2.6	2.6
46	0	0	0
47	0	0	0
48	5.1	5.1	5.1
49	5.1	5.1	5.1

MODE PIN NO.	STOP	FF	REW
50	5.1	5.1	5.1
(A,B,C,D,E,F,G,H,I,J)			
50	0	0	0
(K)			
51	---	---	---
52	1.1	2.4	2.4
53	1.1	2.6	2.6
54	1.2	2.6	2.6
55	1.2	2.6	2.6
56	3.0	3.0	3.0
57	2.6	2.6	2.6
58	2.6	2.6	2.6
59	2.6	2.6	2.6
60	0	0	0
61	1.2	1.2	1.2
62	0	0	0
63	2.6	2.6	2.6
64	2.6	2.6	2.6
65	2.3	2.3	2.6
66	2.8	2.8	2.3
67	5.1	5.1	5.1
68	0	0	0
69	0	0	0
70	0	0	0
71	2.6	2.6	2.6
72	2.6	2.6	2.6
73	0	0	0
74	2.6	2.6	2.6
75	5.1	5.1	5.1
76	1.1	1.1	1.1
77	5.1	5.1	5.1
78	0	0	0
(A,B,C,D,E,H,I,J)			
78	5.1	5.1	5.1
(F,G,K)			
79	5.1	5.1	5.1
80	2.2	2.2	2.2
81	3.4	3.4	3.4
82	5.1	5.1	5.1
83	5.1	5.1	5.1
84	---	---	---
85	5.1	5.1	5.1
86	5.1	5.1	5.1
87	5.1	5.1	5.1
88	5.1	5.1	5.1
89	0	0	0
90	0	0	0
91	0.4	0.4	0.4
92	0	0	0
93	5.1	0	0
94	5.1	5.1	5.1
95	0	5.1	5.1
96	0	0	0
97	2.6	2.6	2.6
98	5.0	5.0	5.0
99	0	0.2	0.2
100	0	0	0

MODE PIN NO.	STOP	FF	REW
IC6002			
1	1.3	1.3	1.3
2	0	0	0
3	1.3	1.3	1.3
4	---	---	---
IC6003			
1	0.1	0.1	0.1
2	13.2	13.2	13.2
3	0.1	0.1	0.1
4	---	---	---
5	0	0	0
6	13.2	13.2	13.2
7	0.1	0.1	0.1
8	13.2	13.2	13.2
9	0.1	0.1	0.1
Q6001			
E	0	0	0
C	9.6	9.6	9.6
B	1.3	1.3	1.3
Q6002			
E	12.1	12.1	12.1
C	0.5	0.5	0.5
B	12.1	12.1	12.1
Q6005			
E	5.1	5.1	5.1
C	5.1	5.1	5.1
B	4.4	4.4	4.4
Q6006			
E	0	0	0
C	0	0	0
B	0.8	0.8	0.8
Q6007			
E	5.1	5.1	5.1
C	5.1	5.1	5.1
B	0	0	0
Q6008			
E	0	0	0
C	5.0	5.0	5.0
B	0	0	0
Q6009			
E	0	0	0
C	5.1	5.1	5.1
B	---	---	---
Q6010			
E	0	0	0
C	5.1	5.1	5.1
B	---	---	---

MODE PIN NO.	STOP	FF	REW
TP6001	---	---	---
TP6003	3.4	3.4	3.4
TP6004	4.9	4.9	4.9
TP6005	5.1	5.1	5.1
TP6006	4.9	4.9	4.9
TP6008	0	0	0
TP6011	0	0	0
TP6014	5.1	5.1	5.1
TP6015	5.1	5.1	5.1
TP6016	9.6	9.6	9.6
TP6020	5.1	5.1	5.1
TP6022	2.6	2.6	2.6
TP6023	2.6	2.6	2.6
TP6201	2.6	2.6	2.6
TP6202	1.9	2.6	2.6
TP6203	2.6	2.6	2.6
TP6204	1.2	1.2	1.2
TP6205	2.8	2.8	2.8
TP6206	0	0	0
TP6207	2.6	2.6	2.6
TP6208	2.5	2.5	2.5
TP6209	1.1	2.4	2.4

COMPARISON CHART  
OF MODELS & MARKS

MODEL	MARK
PV-M1326	A
PV-M1326W	B
VV1306	C
VV1306B	D
VV1316W	E
PV-M1346	F
PV-M1356W	G
PV-M2036	H
VV2006	I
VV2016W	J
PV-M2046	K
VV2706	L
NOT USED	Z


# V. EXPLODED VIEWS

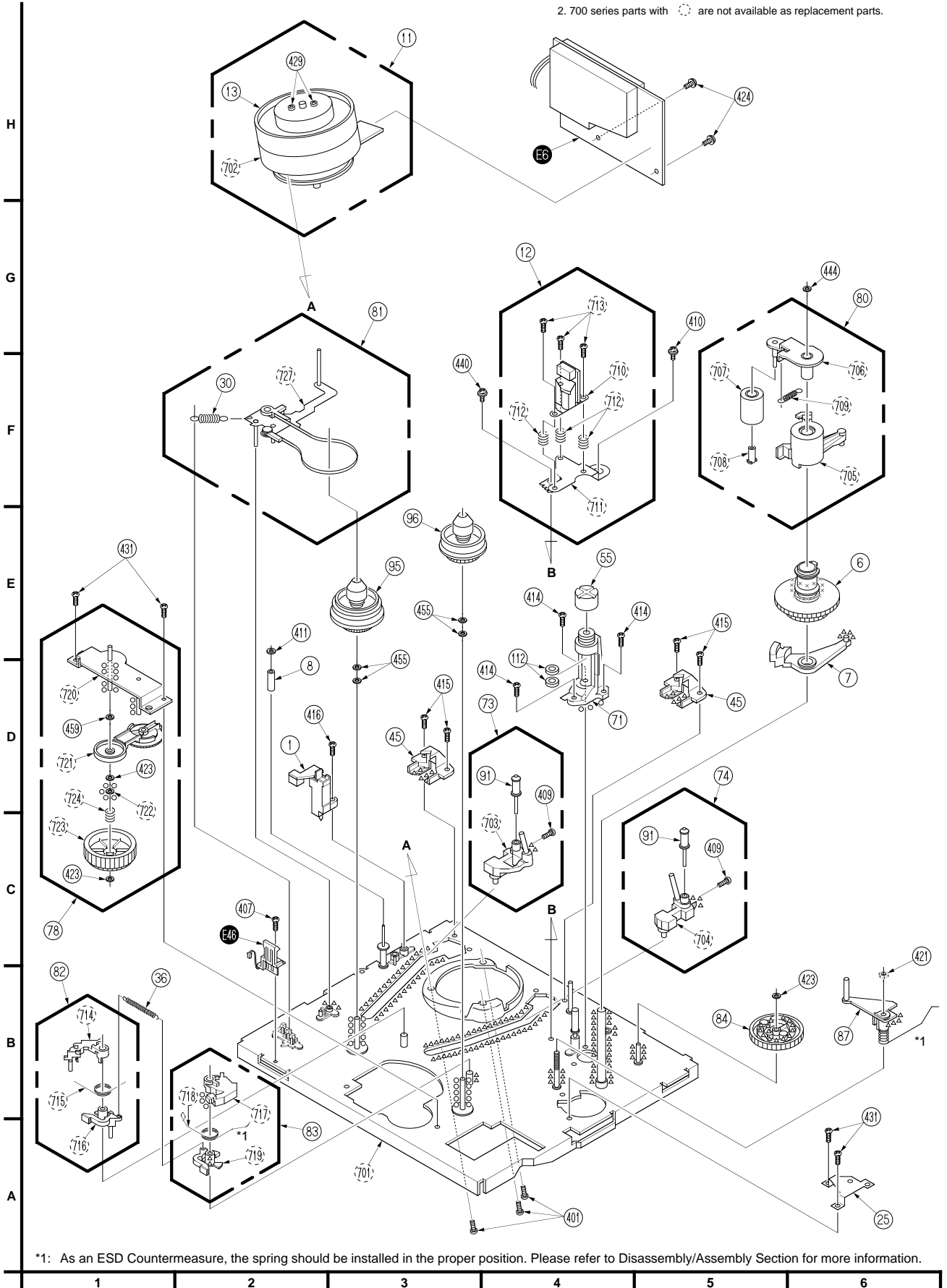
## 1 Transport Section

### Note: 1. LUBRICATION POINTS

When the marked parts are replaced, apply the recommended Lubricants or adhesive for better maintenance of the unit.

Mark	Kind of Lubricant	Availability	Part Number
XXX	Molytone Grease	Available From Factory	MOR265
OOO	Spindle Oil	Purchase From Local Supplier	-----
AAA	Grease	Available From Factory	VFKS0081

2. 700 series parts with  are not available as replacement parts.

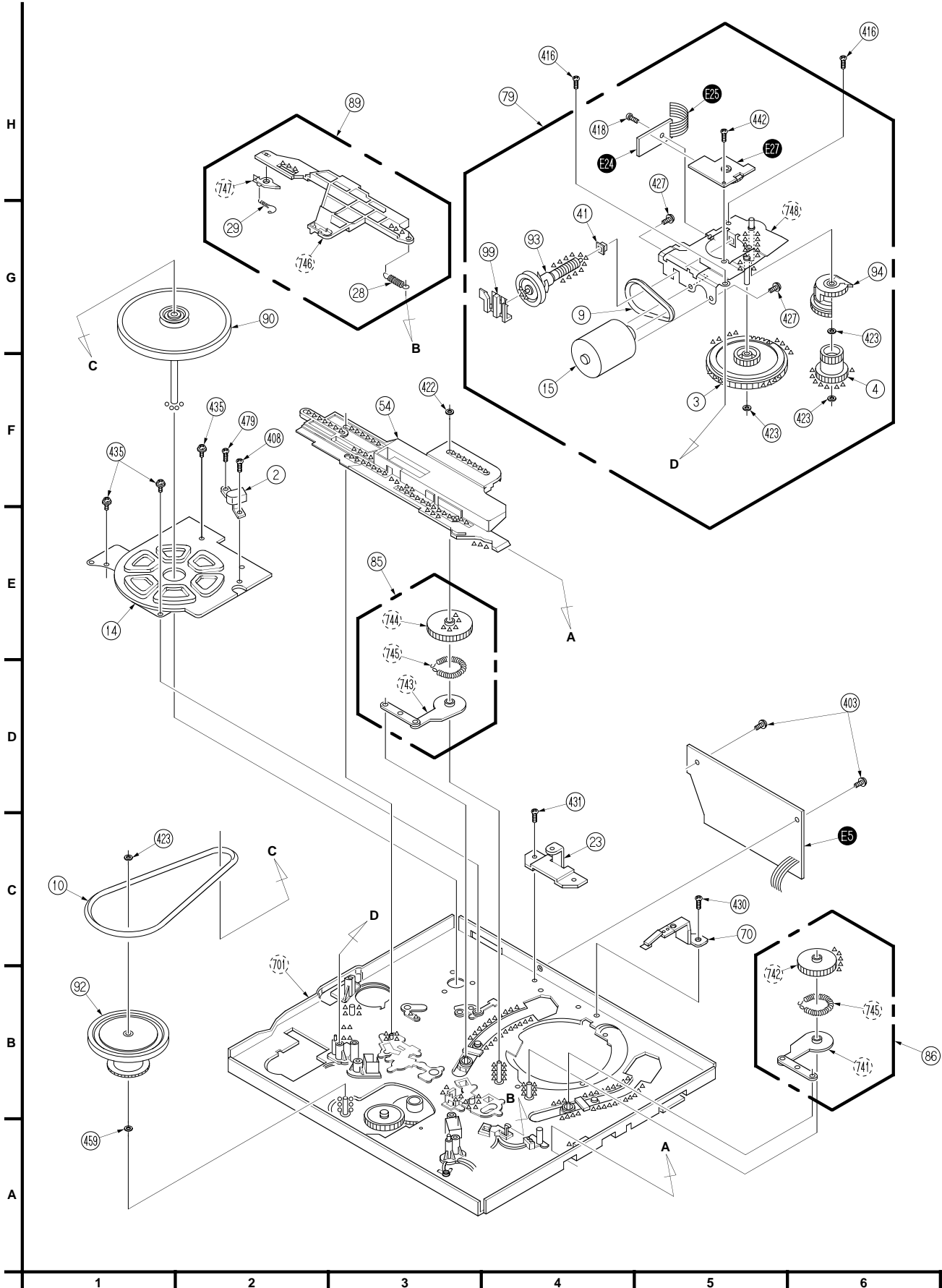


# 2 Moving Mechanism Section

## LUBRICATION POINTS

When the marked parts are replaced, apply the recommended Lubricants or adhesive for better maintenance of the unit.

Mark	Kind of Lubricant	Availability	Part Number
XXX	Molytone Grease	Available From Factory	MOR265
OOO	Spindle Oil	Purchase From Local Supplier	-----
AAA	Grease	Available From Factory	VFKS0081

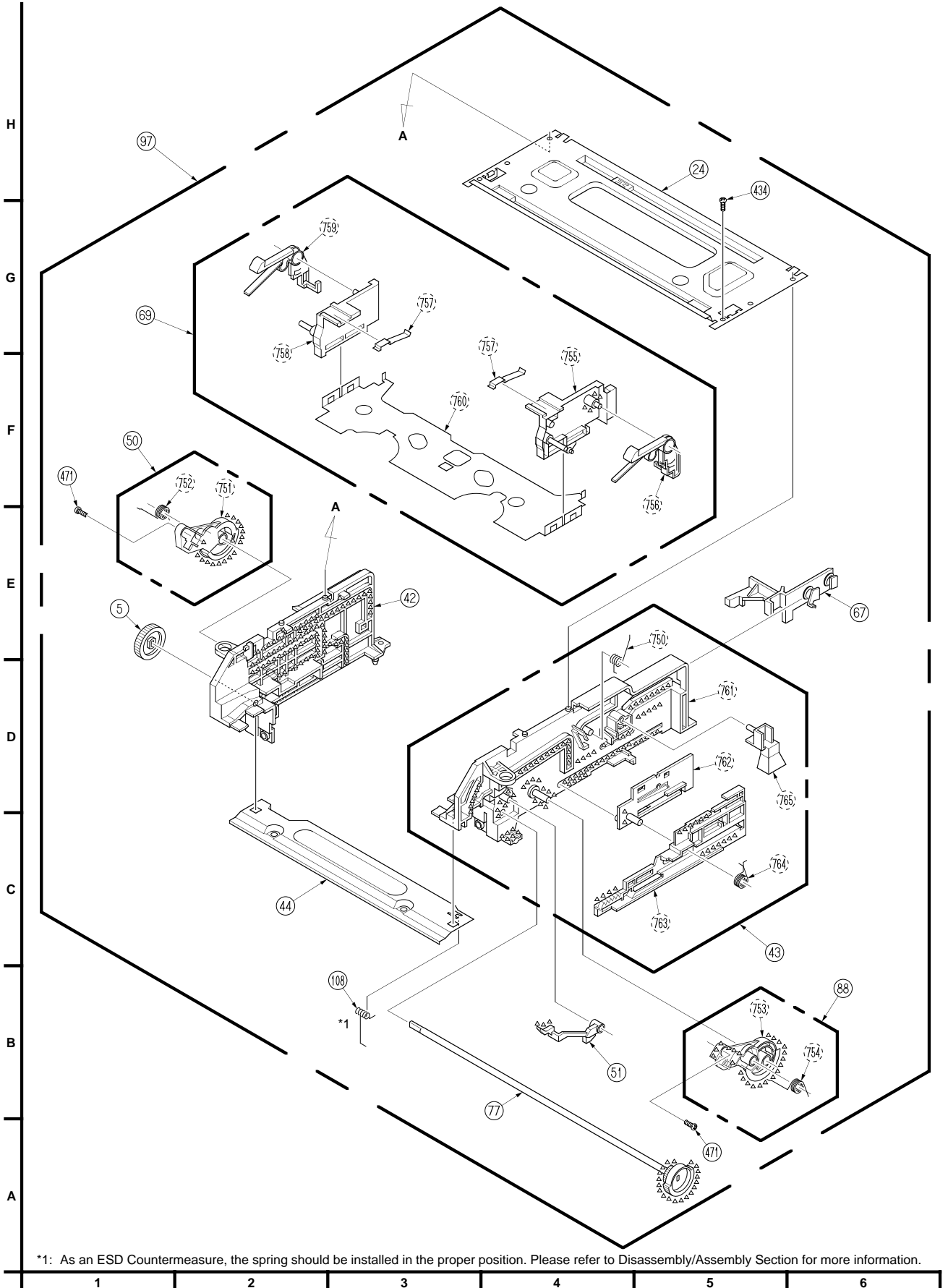


# 3 Cassette Up Mechanism Section

## LUBRICATION POINTS

When the marked parts are replaced, apply the recommended Lubricants or adhesive for better maintenance of the unit.


Mark	Kind of Lubricant	Availability	Part Number
XXX	Molytone Grease	Available From Factory	MOR265
OOO	Spindle Oil	Purchase From Local Supplier	-----
AAA	Grease	Available From Factory	VFKS0081



\*1: As an ESD Countermeasure, the spring should be installed in the proper position. Please refer to Disassembly/Assembly Section for more information.

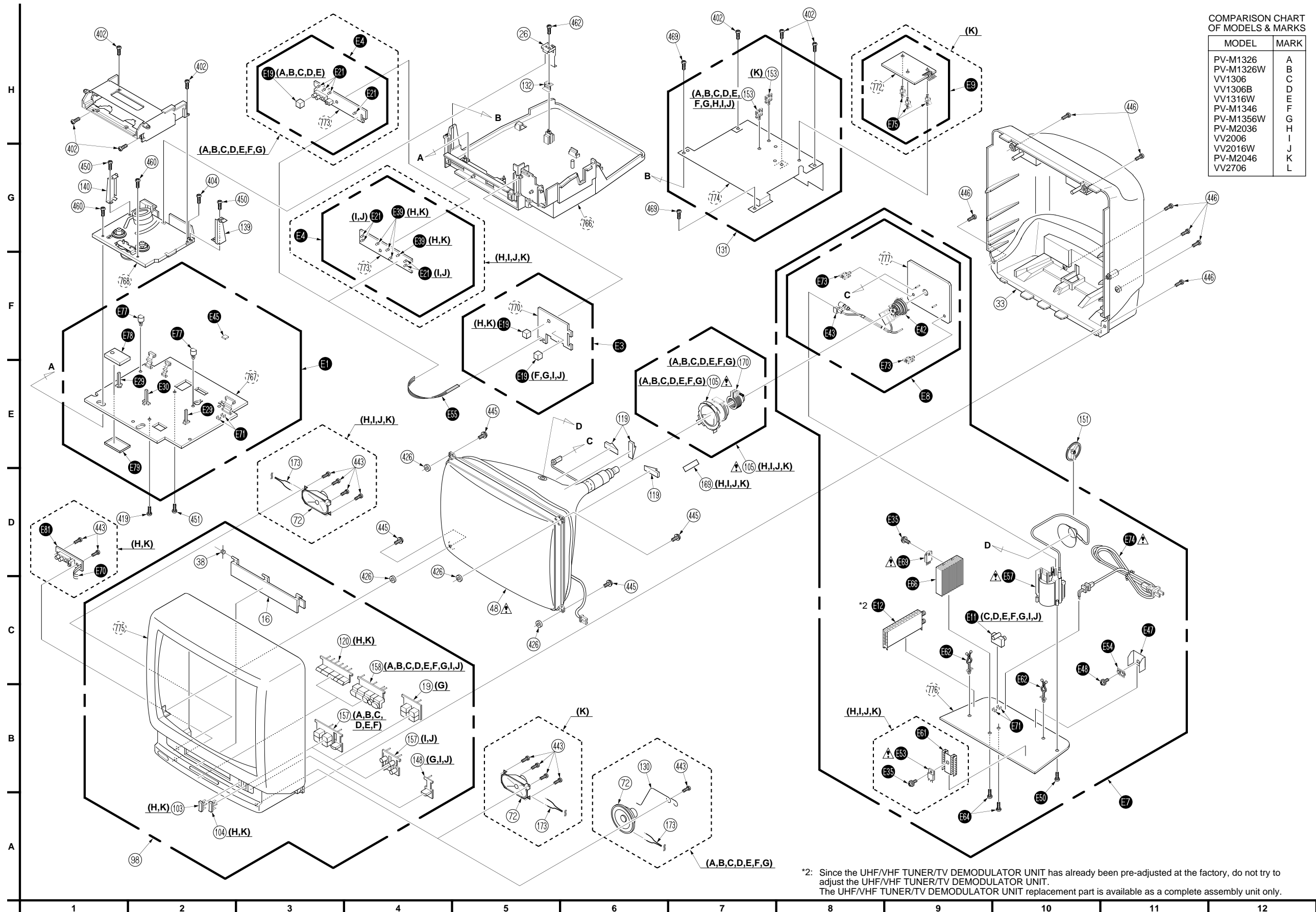
# 4 Chassis Frame Section (A,B,C,D,E,F,G,H,I,J,K)

### IMPORTANT SAFETY NOTICE:

THERE ARE SPECIAL COMPONENTS USED IN THIS EQUIPMENT WHICH ARE IMPORTANT FOR SAFETY. THESE PARTS ARE MARKED BY  IN THE SCHEMATIC DIAGRAMS AND REPLACEMENT PARTS LIST. IT IS ESSENTIAL THAT THESE CRITICAL PARTS SHOULD BE REPLACED WITH MANUFACTURER'S SPECIFIED PARTS TO PREVENT X-RADIATION, SHOCK, FIRE, OR OTHER HAZARDS. DO NOT MODIFY THE ORIGINAL DESIGN WITHOUT PERMISSION OF MANUFACTURER.


COMPARISON CHART OF MODELS & MARKS

MODEL	MARK
PV-M1326	A
PV-M1326W	B
VV1306	C
VV1306B	D
VV1316W	E
PV-M1346	F
PV-M1356W	G
PV-M2036	H
VV2006	I
VV2016W	J
PV-M2046	K
VV2706	L



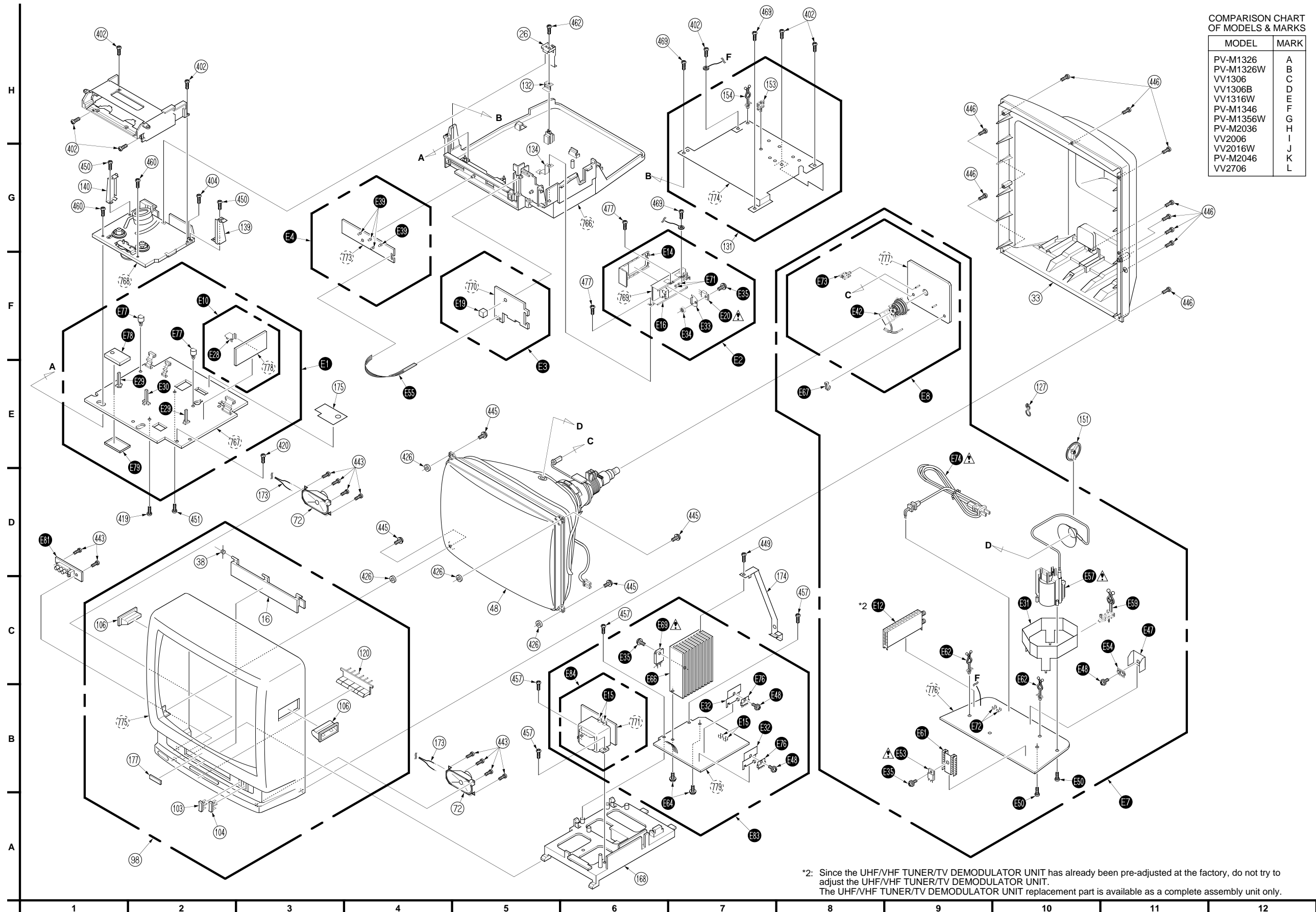
\*2: Since the UHF/VHF TUNER/TV DEMODULATOR UNIT has already been pre-adjusted at the factory, do not try to adjust the UHF/VHF TUNER/TV DEMODULATOR UNIT. The UHF/VHF TUNER/TV DEMODULATOR UNIT replacement part is available as a complete assembly unit only.

# 4 Chassis Frame Section (L)

**IMPORTANT SAFETY NOTICE:**  
 THERE ARE SPECIAL COMPONENTS USED IN THIS EQUIPMENT WHICH ARE IMPORTANT FOR SAFETY. THESE PARTS ARE MARKED BY  IN THE SCHEMATIC DIAGRAMS AND REPLACEMENT PARTS LIST. IT IS ESSENTIAL THAT THESE CRITICAL PARTS SHOULD BE REPLACED WITH MANUFACTURER'S SPECIFIED PARTS TO PREVENT X-RADIATION, SHOCK, FIRE, OR OTHER HAZARDS. DO NOT MODIFY THE ORIGINAL DESIGN WITHOUT PERMISSION OF MANUFACTURER.

COMPARISON CHART OF MODELS & MARKS

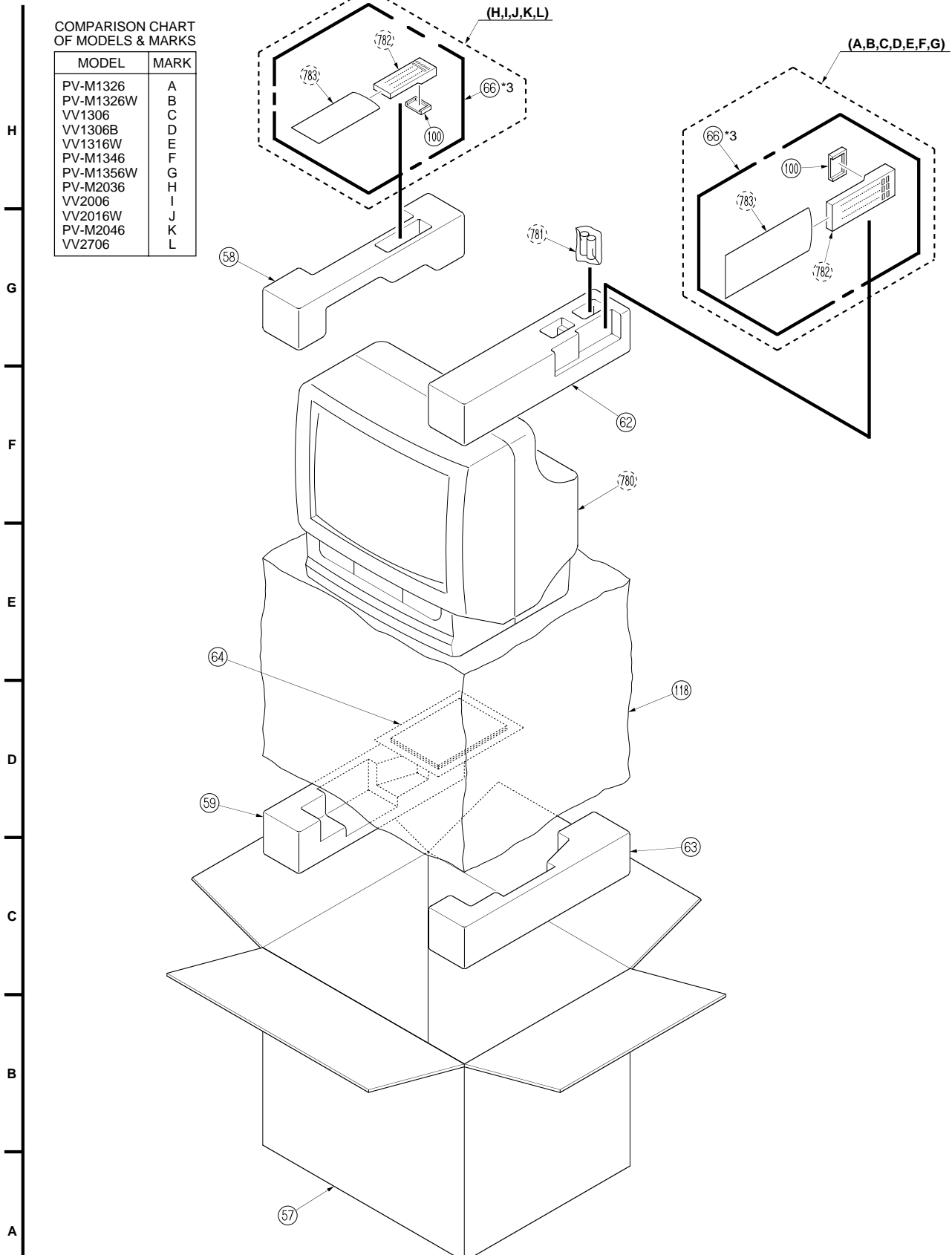
MODEL	MARK
PV-M1326	A
PV-M1326W	B
VV1306	C
VV1306B	D
VV1316W	E
PV-M1346	F
PV-M1356W	G
PV-M2036	H
VV2006	I
VV2016W	J
PV-M2046	K
VV2706	L



# 5 Packing Parts and Accessories Section

COMPARISON CHART OF MODELS & MARKS

MODEL	MARK
PV-M1326	A
PV-M1326W	B
VV1306	C
VV1306B	D
VV1316W	E
PV-M1346	F
PV-M1356W	G
PV-M2036	H
VV2006	I
VV2016W	J
PV-M2046	K
VV2706	L




\*3: The Infrared Remote Control Unit replacement part is available as a complete assembly unit only.  
Do not try to disassemble the Infrared Remote Control Unit. However, the battery cover is available separately as a replacement part.



# VI. REPLACEMENT PARTS LIST

## 1. MECHANICAL REPLACEMENT PARTS LIST

USE ONLY ORIGINAL VIDEO REPLACEMENT PARTS: To maintain original FUNCTION and RELIABILITY of repaired units, use only ORIGINAL REPLACEMENT PARTS which are listed with their part numbers in the parts list section of the Service Manual.

Note:  
 1. Be sure to make your orders of replacement parts according to this list.  
 2. **IMPORTANT SAFETY NOTICE**  
 Components identified by the sign  have special characteristics important for safety. When replacing any of these components, use only the specified parts.  
 3. Section and grid No. of parts shown in Exploded Views are indicated in the Remarks column. Screws and washers remarks show section No. only.  
 EX: 1(D-2) indicates Exploded Views section 1, grid D-2.

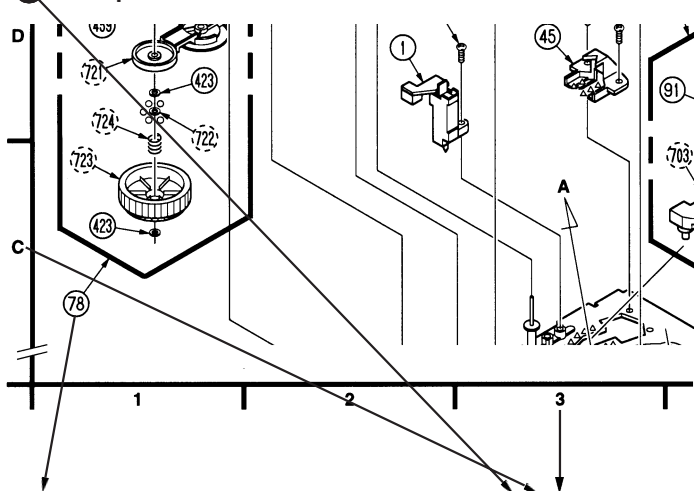
### COMPARISON CHART OF MODELS & MARKS

MODEL	MARK	MODEL	MARK	MODEL	MARK
PV-M1326	A	PV-M1326W	B	VV1306	C
VV1306B	D	VV1316W	E	PV-M1346	F
PV-M1356W	G	PV-M2036	H	VV2006	I
VV2016W	J	PV-M2046	K	VV2706	L




<The complete Exploded Views are shown in this manual.>

### V. EXPLODED VIEWS

#### 1 Transport Section



Ref. No.	Part No.	Part Name	Remarks
<b>MECHANISM PARTS ON CHASSIS</b>			
			(Grid No.)
1	VEPS0541	FE HEAD UNIT	1(D-2)
2	VBKS0024	FG HEAD	2(F-2)
3	VDG50416	CAM GEAR	2(F-5)
4	VDG50415	LINK GEAR	2(F-6)
5	VDG50408	MAIN SHAFT GEAR L	3(E-1)
6	VDG50409	PINCH LIFT CAM	1(E-6)
7	VDG50412	P5 SECTOR GEAR	1(D-6)
8	VDP50210	P1 ROLLER	1(D-2)
9	VDVS0069	LOADING MOTOR BELT	2(G-4)
10	VDVS0070	CAPSTAN BELT	2(C-1)
11		CYLINDER UNIT	
	VEGS0385	( A, B, C, D, E, H, I, J, L )	1(H-3)
	VEGS0387	( F, G, K )	1(H-3)
12		A/C HEAD UNIT	
	VEHS0548	( A, B, C, D, E, F, G, H, I, J, K )	1(G-4)
	VEHS0551	( L )	1(G-4) AKEI
13		UPPER CYLINDER UNIT	
	VEHS0553	( A, B, C, D, E, H, I, J, L )	1(H-2)
	VEHS0554	( F, G, K )	1(H-2)
14	VEMS0295	CAPSTAN STATOR UNIT	2(E-1)
15	VEMS0296	LOADING MOTOR UNIT	2(F-4)

Ref. No.	Part No.	Part Name	Remarks
16		CASSETTE DOOR	
	TKK779559-9	( A )	4(C-3) AKEI
	TKK779559-1	( B )	4(C-3) AKEI
	TKK779568-8	( C, D )	4(C-3) AKEI
	TKK779559-8	( E )	4(C-3) AKEI
	TKK779565-1	( F )	4(C-3) AKEI
	TKK779565-3	( G )	4(C-3) AKEI
	TKK779567-8	( I )	4(C-3) AKEI
	TKK779569-9	( J )	4(C-3) AKEI
		CASSETTE DOOR UNIT	
	TXFKK01204P	( H, K )	4(C-3) AKEI
	TXFKK12765Q	( L )	4(C-3) AKEI
19		CH/VOL BUTTON	
	TBX7786405	( G )	4(B-4) AKEI
23	VMS2117	P.C.B. BRACKET	2(C-4) AKEI
24	VMS2099	TOP PLATE	3(H-5)
25	VMS2103	SUPPORT ANGLE	1(A-6)
26	VMS2122	CHASSIS ANGLE	4(H-5) AKEI
28	VMS1099	ROD RETURN SPRING	2(G-3)
29	VMS0896	RELEASE PIECE SPRING	2(G-2)
30	VMS1103	TENSION SPRING	1(F-2)
33		BACK COVER	
	TKU782401	( A )	4(F-10) AKEI
	TKU782402	( B )	4(F-10) AKEI
	TKU782403	( C, D, F )	4(F-10) AKEI
	TKU782404	( E, G )	4(F-10) AKEI
	TKU782301	( H )	4(F-10) AKEI
	TKU782302	( I )	4(F-10) AKEI
	TKU782303	( J )	4(F-10) AKEI
		BACK COVER UNIT	
	TXFKU01206	( K )	4(F-10) AKEI
	TXFKU01276	( L )	4(F-10) AKEI
36	VMS0910	MAIN BRAKE SPRING	1(B-1)
38		CASSETTE DOOR SPRING	
	TES7299	( A, B, C, D, E )	4(D-2)
	TES7612	( F, G, H, I, J, K, L )	4(D-2)
41	VDS0246	WORM SHAFT SUPPORT A	2(G-4)
42	VMS0949	SIDE PLATE L	3(E-5)
43	VXAS1709	SIDE PLATE R UNIT	3(C-5)
44	VMS2100	CASSETTE GUIDE	3(C-2)
45	VMS0942	POST STOPPER	1(D-3/D-5)
48		PICTURE TUBE SUB ASS'Y	
	TXFVB02135P	( A, B, D, E )	 4(C-5) AKEI
	TXFVB02135	( C, F, G )	 4(C-5) AKEI
	TXFVB02206	( H, I, J, K )	 4(C-5) AKEI
		PICTURE TUBE ASS'Y	
	TXFVB01275	( L )	4(C-5) AKEI
50	VXLS1026	WIPER ARM L UNIT	3(F-1)
51	VMS0964	CASSETTE LEVER	3(B-4) AKEI
54	VMS0105	MAIN ROD	2(F-3)
55	VXD50190	THRUST SCREW UNIT	1(E-4)
57		PACKING CASE	
	TPC7810817	( A )	5(A-2) AKEI
	TPC7810818	( B )	5(A-2) AKEI
	TPC7810819	( C )	5(A-2) AKEI
	TPC7810823	( D )	5(A-2) AKEI
	TPC7810820	( E )	5(A-2) AKEI
	TPC7810815	( F )	5(A-2) AKEI
	TPC7810816	( G )	5(A-2) AKEI
	TPC7841719	( H )	5(A-2) AKEI
	TPC7841721	( I )	5(A-2) AKEI
	TPC7841722	( J )	5(A-2) AKEI
	TPC7841718	( K )	5(A-2) AKEI
	TPC7841806	( L )	5(A-2) AKEI
58		LEFT CUSHION -TOP	
	TPD971048	( A, B, C, D, E )	5(G-2) AKEI
	TPD971042	( F, G )	5(G-2) AKEI
	TPD971040	( H, K )	5(G-2) AKEI
	TPD971044	( I, J )	5(G-2) AKEI
	TPD971050	( L )	5(G-2) AKEI
59		LEFT CUSHION -BOTTOM	
	TPD972048	( A, B, C, D, E )	5(D-2) AKEI
	TPD972042	( F, G )	5(D-2) AKEI
	TPD972040	( H, K )	5(D-2) AKEI
	TPD972044	( I, J )	5(D-2) AKEI
	TPD972050	( L )	5(D-2) AKEI

Ref. No.	Part No.	Part Name	Remarks
62		RIGHT CUSHION -TOP	
	TPD971047	( A,B,C,D,E )	5(F-4) AKEI
	TPD971041	( F,G )	5(F-4) AKEI
	TPD971039	( H,K )	5(F-4) AKEI
	TPD971043	( I,J )	5(F-4) AKEI
	TPD971049	( L )	5(F-4) AKEI
63		RIGHT CUSHION -BOTTOM	
	TPD972047	( A,B,C,D,E )	5(C-5) AKEI
	TPD972041	( F,G )	5(C-5) AKEI
	TPD972039	( H,K )	5(C-5) AKEI
	TPD972043	( I,J )	5(C-5) AKEI
	TPD972049	( L )	5(C-5) AKEI
64		FAN BAG	
	VQFS3198	( A,B )	5(E-2) AKEI
	VQFS3200	( C,D,E )	5(E-2) AKEI
	VQFS3192	( F,G )	5(E-2) AKEI
	VQFS3193	( H )	5(E-2) AKEI
	VQFS3201	( I,J )	5(E-2) AKEI
	VQFS3194	( K )	5(E-2) AKEI
	VQFS3202	( L )	5(E-2) AKEI
66		INFRARED REMOTE CONTROL UNIT	
	VSQS1436	( A )	5(H-5) AKEI
	VSQS1437	( B )	5(H-5) AKEI
	VSQS1404	( C,D,I )	5(H-3,H-5) AKEI
	VSQS1409	( E,J )	5(H-3,H-5) AKEI
	VSQS1440	( F,H )	5(H-3,H-5) AKEI
	VSQS1441	( G )	5(H-5) AKEI
	VSQS1443	( K )	5(H-3) AKEI
	VSQS1438	( L )	5(H-3) AKEI
67	VMLS0948	CASSETTE OPENER	3(E-6)
69	VXAS1716	CASSETTE HOLDER UNIT	3(G-1)
70	VXBS0058	EARTH PLATE UNIT	2(C-5)
71	VXDS0180	CAPSTAN HOLDER UNIT	1(D-4)
72		SPEAKER	
	LASUSP6501C	( A,B,C,D,E,F,G )	4(A-6) AKEI
	EASG9D540A2	( H,I,J )	4(D-3) AKEI
	EAS9D530KAG	( K )	4(A-5/D-3) AKEI
	EASG9D540A2	( L )	4(A-5/D-3) AKEI
73	VXDS0186	LOADING POST BASE S UNIT	1(D-4)
74	VXDS0187	LOADING POST BASE T UNIT	1(D-5)
77	VXJS0080	MAIN SHAFT UNIT	3(B-4)
78	VXKS0817	CENTER BLOCK UNIT	1(C-1)
79	VXKS0778	MOTOR BLOCK ASS'Y	2(H-4)
80	VXLS1014	PRESSURE ROLLER ARM UNIT	1(G-6)
81	VXLS1019	TENSION ARM UNIT	1(G-3)
82	VXLS0843	BRAKE S UNIT	1(B-1)
83	VXLS1018	BRAKE T UNIT	1(A-2)
84	VDGS0413	SECOND CAM GEAR	1(B-5)
85	VXLS0850	LOADING ARM T UNIT	2(E-3)
86	VXLS0852	LOADING ARM S UNIT	2(B-6)
87	VXLS1012	PS ARM UNIT	1(B-6)
88	VXLS1027	WIPER ARM R UNIT	3(B-6)
89	VXMS0129	SECONDARY ROD UNIT	2(H-3)
90	VXPS0367	CAPSTAN ROTOR UNIT	2(G-2)
91	VXPS0374	ROLLER POST UNIT	1(C-5/D-4)
92	VXPS0376	CLUTCH UNIT	2(B-1)
93	VXPS0369	WORM UNIT	2(G-4)
94	VXPS0372	GENEVA GEAR UNIT	2(G-6)
95	VDRS0053	SUPPLY REEL TABLE	1(E-3)
96	VXRS0062	TAKEUP REEL TABLE UNIT	1(E-3)
97	VXYS1066	CASSETTE UP ASS'Y	3(H-1) AKEI
98		CABINET ASS'Y	
	TXFKY01136P	( A )	4(A-2) AKEI
	TXFKY01136PW	( B )	4(A-2) AKEI
	TXFKY01136Q	( C,D )	4(A-2) AKEI
	TXFKY01136QW	( E )	4(A-2) AKEI
	TXFKY01136GP	( F )	4(A-2) AKEI
	TXFKY1136GPW	( G )	4(A-2) AKEI
	TXFKY01206P	( H )	4(A-2) AKEI
	TXFKY01206Q	( I )	4(A-2) AKEI
	TXFKY01206QW	( J )	4(A-2) AKEI
	TXFKY01206GP	( K )	4(A-2) AKEI
	TXFKY1276SQ	( L )	4(A-2) AKEI
99	VDBS0341	WORM SHAFT SUPPORT B	2(G-4)
100		BATTERY COVER	
	VKFS1111	( A,C,D,F,H,I,K,L )	5(H-3,H-5)
	VKFS1112	( B,E,G,J )	5(H-3,H-5) AKEI
103		VOLUME BUTTON	
	TBX7786102	( H,K,L )	4(A-2) AKEI

Ref. No.	Part No.	Part Name	Remarks
104		CHANNEL BUTTON	
	TBX7786002	( H,K,L )	4(A-2) AKEI
105		DEFLECTION YOKE	
	TLY26389F1	( A,B,D,E )	4(E-7) AKEI
	OR TLY26389S1		4(E-7) AKEI
	TLY26333F4	( C,F,G )	4(E-7) AKEI
	OR TLY26391S1		4(E-7) AKEI
	LLY2303F	( H,I,J,K )	4(E-7) AKEI
	OR LLY6305S		4(E-7) AKEI
106		CABINET GRIP	
	TKK778205-2	( L )	4(B-3/C-1) AKEI
108	VMBS1091	EARTH SPRING	3(B-3)
112	VMXS0511	DUST SEAL	1(D-4)
118		POLYETHYLENE BAG	
	TPE744031	( A,B,C,D,E,F,G )	5(D-5) AKEI
	TPE744035	( H,I,J,K )	5(D-5) AKEI
	TPE744037	( L )	5(D-5) AKEI
119		DY ADJUSTMENT RUBBER	
	LMH65001A	( A,B,C,D,E,F,G,H,I,J,K )	4(D-6/E-6) AKEI
120		OPERATION BUTTON	
	TBX7786302	( H,K )	4(C-4) AKEI
	TBX7786903	( L )	4(C-4) AKEI
127		PURSE LOCK CLAMPER	
	TMM77409	( L )	4(E-10)
130		SPEAKER SPRING	
	TES7368-1	( A,B,C,D,E,F,G )	4(B-6)
131		TOP SHIELD PLATE ASS'Y	
	TXFUC11135	( A,B,C,D,E,F,G )	4(G-7) AKEI
	TXFUC13205	( H,I,J )	4(G-7) AKEI
	TXFUC11205	( K )	4(G-7) AKEI
	TXFUC11275	( L )	4(G-7) AKEI
132	VSCS2057	EARTH PLATE	4(H-5) AKEI
134		POWER EARTH PLATE	
	VSCS2068	( L )	4(G-5) AKEI
139	VMAS2121	SUPPORT ANGLE -R	4(G-2) AKEI
140	VMAS2120	SUPPORT ANGLE -L	4(G-1) AKEI
148		POWER BUTTON	
	TBX7786403	( G )	4(B-4) AKEI
	TBX7786801	( I,J )	4(B-4) AKEI
151	TMM15404-1	ANODE LEAD CLAMPER	4(E-10)
153	TMM77412	CLAMPER	4(H-7) AKEI
154		CLAMPER	
	TMM77413	( L )	4(H-7) AKEI
157		OPERATION BUTTON 1	
	TBX7785806	( A )	4(B-3) AKEI
	TBX7785804	( B,E )	4(B-3) AKEI
	TBX7785809	( C,D )	4(B-3) AKEI
	TBX7786402	( F )	4(B-3) AKEI
	TBX7786611	( I )	4(B-4) AKEI
	TBX7786605	( J )	4(B-4) AKEI
158		OPERATION BUTTON 2	
	TBX7785904	( A )	4(B-4) AKEI
	TBX7785902	( B,E )	4(B-4) AKEI
	TBX7785907	( C,D )	4(B-4) AKEI
	TBX7786501	( F )	4(B-4) AKEI
	TBX7786502	( G )	4(B-4) AKEI
	TBX7786711	( I )	4(B-4) AKEI
	TBX7786705	( J )	4(B-4) AKEI
168		SUB FRAME	
	TMX77409	( L )	4(A-6) AKEI
169		PERMALLOY MAGNETIC STRIP	
	TSM10032-2	( H,I,J,K )	4(D-7) AKEI
170		CONVERGENCE MAGNET	
	TLC2042-2	( A,B,C,D,E,F,G )	4(E-7)
173		SPEAKER LEAD ASS'Y	
	VEKSS355	( A,B,C,D,E,F,G )	4(A-6) AKEI
	VEKSS356	( H,I,J )	4(D-3) AKEI
	VEKSS372	( K )	4(A-5/D-3) AKEI
	VEKSS355	( L )	4(B-4/D-3) AKEI
174		HEAT SINK SUPPORT ANGLE	
	TUX77115	( L )	4(C-7) AKEI
175		SHIELD PLATE	
	VSCS2075	( L )	4(E-3) AKEI
177		BADGE	
	TBM773005	( L )	4(B-2)

Ref. No.	Part No.	Part Name	Remarks
<b>SCREWS &amp; WASHERS</b>			
401	VHDS0475	SCREW 3X8	1
402	XTV3+8FR	TAPPING SCREW 3X8	4
403	VHDS0482	TAPPING SCREW 2.6X5	2
404	VHDS0472	SCREW 3X10	4
407	XYC2+CF5	SCREW WITH WASHER 2X5	1
408	VHDS0402	SCREW 2.6X10	2
409	VHDS0236	LOCK SCREW	1
410	VHDS0481	SCREW WITH WASHER	1
411	VMXS0664	CUT WASHER	※ 1
414		SCREW 2.6X5	
	XSN26+5	( A,B,C,D,E,F,G,H,I,J,K )	1
		SCREW 2.6X6	
	XSN26+6	( L )	1
415	XTV26+8FJ	TAPPING SCREW 2.6X8	1
416	XTN26+10G	TAPPING SCREW 2.6X10	1,2
418	XTV2+5F	TAPPING SCREW 2X5	2
419	VHDS0464	TAPPING SCREW 2.6X8	4
420		SCREW 3X10	
	XYC3+FG10FR	( L )	4
421	VHNS0015	M3 NUT	1
422	XWGV2D5G	POLY SLIDER WASHER 2	2
423	VMXS0336	CUT WASHER	※ 1,2
424	XYC26+CF6J	SCREW WITH WASHER 2.6X6	1
426		CUSHION RUBBER	
	TMM16517	( A,B,C,D,E,F,G )	4
	TMM77532	( H,I,J,K,L )	4
427	XYN3+C4	SCREW WITH WASHER 3X4	2
429	VHDS0491	SCREW 2.6X6	1
430	XTV26+6FFZJ	TAPPING SCREW 2.6X6	2
431	XTV26+6FJ	TAPPING SCREW 2.6X6	1,2
434	XTB26+6G	TAPPING SCREW 2.6X6	3
435	XYE26+CF8J	TAPPING SCREW WITH WASHER	2
440	VHDS0478	AC FRONT SCREW	1
442	XTV2+5FFZ	TAPPING SCREW 2X5	2
443	XTV4+12A	TAPPING SCREW 4X12	4
444	VMXS0857	CUT WASHER	※ 1
445		CRT SCREW	
	THT1056	( A,B,C,D,E,F,G,H,I,J,K )	4
	LHT60001Y	( L )	4
446	XTV4+16A	TAPPING SCREW 4X16	4
449		TAPPING SCREW 3X8	
	VHDS0446	( L )	4
450	VHDS0480	TAPPING SCREW 2.6X6	4
451	VHDS0465	TAPPING SCREW 2.6X8	4
455	XWGV3Z54G	POLY SLIDER WASHER 3	1
457		TAPPING SCREW 3X12	
	VHDS0445	( L )	4
459	XWGV3D54G	POLY SLIDER WASHER 3	1,2
460	XTN4+12A	TAPPING SCREW 4X12	4
462	XTN4+15AR	SCREW 4X15	4
469	VHDS0444	TAPPING SCREW 3X10	4
471	VHDS0470	SCREW	3
477		SCREW 3X10	
	VHDS0286	( L )	4
479	VHDS0485	TAPPING SCREW WITH WASHER	2
□			

Ref. No.	Part No.	Part Name	Remarks						
<b>SERVICE FIXTURES &amp; TOOLS</b>									
	VFMS0001H6	VHS ALIGNMENT TAPE							
	VFKS0009	REEL TABLE HEIGHT FIXTURE							
	VFKS0010	POST ADJUSTMENT PLATE							
	VFKS0081	GREASE							
	VFK0329	POST ADJUSTMENT SCREWDRIVER							
	MOR265	MOLYTONE GREASE							
	VFK27	HEAD CLEANING STICK							
	VFKS0082	H-POSITION ADJ. SCREWDRIVER							
	TSM10032-2	PERMALLOY MAGNETIC STRIP							
<b>ITEM NUMBERS OF PARTS NOT SUPPLIED</b>									
Item No.	Drawing No.	Item No.	Drawing No.	Item No.	Drawing No.	Item No.	Drawing No.	Item No.	Drawing No.
701	1, 2	702	1	703	1	704	1	705	1
706	1	707	1	708	1	709	1	710	1
711	1	712	1	713	1	714	1	715	1
716	1	717	1	718	1	719	1	720	1
721	1	722	1	723	1	724	1	727	1
741	2	742	2	743	2	744	2	745	2
746	2	747	2	748	2	750	3	751	3
752	3	753	3	754	3	755	3	756	3
757	3	758	3	759	3	760	3	761	3
762	3	763	3	764	3	765	3	766	4
767	4	768	4	769	4	770	4	771	4
772	4	773	4	774	4	775	4	776	4
777	4	778	4	779	4	780	5	781	5
782	5	783	5						
<b>UNUSED ITEM NUMBERS</b>									
17, 18, 20, 21, 22, 27, 31, 32, 34, 35, 37, 39, 40, 46, 47, 49, 52, 53, 56, 60, 61, 65, 68, 75, 76, 101, 102, 107, 109, 110, 111, 113, 114, 115, 116, 117, 121, 122, 123, 124, 125, 126, 128, 129, 133, 135, 136, 137, 138, 141, 142, 143, 144, 145, 146, 147, 149, 150, 152, 155, 156, 159, 160, 161, 162, 163, 164, 165, 166, 167, 171, 172, 176, 405, 406, 412, 413, 417, 425, 428, 432, 433, 436, 437, 438, 439, 441, 447, 448, 452, 453, 454, 456, 458, 461, 463, 464, 465, 466, 467, 468, 470, 472, 473, 474, 475, 476, 478									

※ THIS CUT WASHER IS NOT REUSABLE. IF REMOVED, INSTALL A NEW ONE.

# 2. ELECTRICAL REPLACEMENT PARTS LIST



(E4, E5, E6, E7, E8, E9, E81, E83, E84)

USE ONLY ORIGINAL VIDEO REPLACEMENT PARTS: To maintain original FUNCTION and RELIABILITY of repaired units, use only ORIGINAL REPLACEMENT PARTS which are listed with their part numbers in the parts list section of the Service Manual.

**Special Note:**

All integrated circuits and many other semiconductor devices are electrostatically sensitive and therefore require the special handling techniques described under the "ELECTROSTATICALLY SENSITIVE (ES) DEVICES" Section of this service manual.

**Note:**

- Be sure to make your orders of replacement parts according to this list.
- IMPORTANT SAFETY NOTICE**  
Components identified by the sign  have special characteristics important for safety. When replacing any of these components, use only the specified parts.
- Unless otherwise specified:  
All resistors are in OHMS(Ω), 1/4W, ±5%, carbon, K=1,000Ω, M=1,000KΩ.  
All capacitors are in MICROFARADS(μF), P=μF, ±10%.  
All coils are in MICROHENRIES(μH), M=10<sup>-2</sup>μH, ±10%.
- C.B.A.: Circuit Board Assembly.
- P.C.B.: Printed Circuit Board.
- E.S.D.: Electrostatically Sensitive Devices.
- ITEM NUMBERS WITH CAPITAL LETTER E  
Item numbers with capital letter E (Example: E1, E2,...) in the Ref. No. column are shown in the exploded views. The E item numbers are also printed on the same page at the top of the column.
- The parts with "■" mark are supplied individually or as a unit.  
The parts with "▲" mark are supplied individually or as a unit, and are included in "■" parts listed directly above in the parts list.
- RTL: Retention Time Limited  
This indicates that the retention time is limited for this item. After the discontinuation of this item in production, it will no longer be available.
- NR: Non Repairable Board Ass'y
- SERVICE OF CHIP PARTS  
When servicing chip parts, please use a soldering iron of less than 30 watts. Refer to "IC, TRANSISTOR AND CHIP PART INFORMATION" page.
- List of Abbreviations for Part Names & Descriptions:  
MGF CHIP: METAL GLAZE FILM CHIP  
C CHIP: CERAMIC CHIP  
COMPLX CMP: COMPLEX COMPONENT  
W FLMPRF: WIREWOUND FLAMEPROOF
- The parts with  are 0 OHM resistor. When replacing, a wire can be substituted for a 0 OHM resistor.
- Parts different in shape or size may be used. However, only interchangeable parts will be supplied as service replacement parts.

**COMPARISON CHART OF MODELS & MARKS**

MODEL	MARK	MODEL	MARK	MODEL	MARK
PV-M1326	A	PV-M1326W	B	VV1306	C
VV1306B	D	VV1316W	E	PV-M1346	F
PV-M1356W	G	PV-M2036	H	VV2006	I
VV2016W	J	PV-M2046	K	VV2706	L

(E1, E2, E3, E10)

Ref. No.	Part No.	Part Name	Remarks
<b>PRINTED CIRCUIT BOARD ASSEMBLY</b>			
E1	VEPS3031B1 ( A, B )	MAIN C. B. A.	E. S. D. RTL AKEI
E1	VEPS3031C1 ( C, D, E )	MAIN C. B. A.	■ E. S. D. RTL AKEI
E1	VEPS3031A1 ( F, G )	MAIN C. B. A.	■ E. S. D. RTL AKEI
E1	VEPS3031F1 ( H )	MAIN C. B. A.	■ E. S. D. RTL AKEI
E1	VEPS3031G1 ( I, J )	MAIN C. B. A.	■ E. S. D. RTL AKEI
E1	VEPS3031D1 ( K )	MAIN C. B. A.	■ E. S. D. RTL AKEI
E1	VEPS3034C1 ( L )	MAIN C. B. A.	■ E. S. D. RTL AKEI
E10	VEPS4009A1 ( L )	TV STEREO C. B. A.	▲ E. S. D. RTL AKEI
E2	VEPS1003A1 ( L )	POWER SUPPLY C. B. A.	■ RTL AKEI
E3	VEPS07591A1 ( A, B, C, D, E )	OPERATION I C. B. A.	■ RTL AKEI
E3	VEPS07597A1 ( F, G )	OPERATION I C. B. A.	■ RTL AKEI
E3	VEPS07593A1 ( H, K, L )	OPERATION I C. B. A.	■ RTL AKEI
E3	VEPS07603A1 ( I, J )	OPERATION I C. B. A.	■ RTL AKEI

Ref. No.	Part No.	Part Name	Remarks
E4	VEPS07592C1 ( A, B )	OPERATION II C. B. A.	■ RTL AKEI
E4	VEPS07592A1 ( C, D, E )	OPERATION II C. B. A.	■ RTL AKEI
E4	VEPS07598B1 ( F, G )	OPERATION II C. B. A.	■ RTL AKEI
E4	VEPS07594A1 ( H, K, L )	OPERATION II C. B. A.	■ RTL AKEI
E4	VEPS07604A1 ( I, J )	OPERATION II C. B. A.	■ RTL AKEI
E81	VEPS4011A1 ( H )	AUDIO/VIDEO JACK C. B. A.	■ RTL AKEI
E81	VEPS04128C1 ( K )	AUDIO/VIDEO JACK C. B. A.	■ RTL AKEI
E81	VEPS04128D1 ( L )	AUDIO/VIDEO JACK C. B. A.	■ RTL AKEI
E83	VEPS01048C1 ( L )	STEREO AMP/TV AVR C. B. A.	■ RTL AKEI
E84	VEPS01049A1 ( L )	POWER AMP C. B. A.	▲ RTL AKEI
E5	VEPS02221B1	CAPSTAN MOTOR DRIVE C. B. A.	■ RTL
E6	VEPS5001CA1 ( A, B, C, D, E, H, I, J, L )	HEAD AMP C. B. A.	■ RTL AKEI
E6	VEPS5002CA1 ( F, G, K )	HEAD AMP C. B. A.	■ RTL AKEI
E9	VEPS4006A1 ( K )	TV STEREO AMP C. B. A.	■ E. S. D. RTL AKEI
E7	LRM61001YZ ( A )	TV MAIN C. B. A.	■ RTL AKEI
E7	LRM61001YA ( B )	TV MAIN C. B. A.	■ RTL AKEI
E7	LRM61001ZZ ( C, F )	TV MAIN C. B. A.	■ RTL AKEI
E7	LRM61001XZ ( D )	TV MAIN C. B. A.	■ RTL AKEI
E7	LRM61001XA ( E )	TV MAIN C. B. A.	■ RTL AKEI
E7	LRM61001ZA ( G )	TV MAIN C. B. A.	■ RTL AKEI
E7	LRM61001BZ ( H )	TV MAIN C. B. A.	■ RTL AKEI
E7	LRM61001GZ ( I )	TV MAIN C. B. A.	■ RTL AKEI
E7	LRM61001GA ( J )	TV MAIN C. B. A.	■ RTL AKEI
E7	LRM61001AZ ( K )	TV MAIN C. B. A.	■ RTL AKEI
E7	VEBS0254B1 ( L )	TV MAIN C. B. A.	■ RTL AKEI
E8	TNP73154EE ( A, B, C, D, E, F, G )	CRT C. B. A.	▲ RTL AKEI
E8	TNP73154FF ( H, I, J, K )	CRT C. B. A.	▲ RTL AKEI
E8	TNP73154GG ( L )	CRT C. B. A.	▲ RTL AKEI
<b>MAIN C. B. A. ( A, B, C, D, E, F, G, H, I, J, K )</b>			■
<b>INTEGRATED CIRCUITS</b>			
IC1001	0N3131-R.KT	IC BIPOLAR LINEAR ERROR V. DET	▲
IC3001	AN3459NFBP	IC BIPOLAR LINEAR VIDEO/AUDIO PROCESS	
IC3201	MN3870S	IC MOS LOGIC CCD 1H DELAY	E. S. D.
IC3301	LC86431259S7	IC MOS LOGIC OSD/CCV	E. S. D. AKEI
IC4151	AN5265 ( A, B, C, D, E, F, G, H, I, J )	IC BIPOLAR LINEAR AUDIO AMP	
IC5301	AN5366FB	IC BIPOLAR LINEAR Y/C SIGNAL PROCESS	
IC6001	MN6750647A3E	IC MOS LOGIC SYSTEM CTL/SERVO /TIMER	E. S. D.
IC6002	VEKSS335	REEL SENSOR UNIT	AKEI
IC6003	TA7291S	IC BIPOLAR LINEAR LOADING MOTOR DRIVE	

(E29)

Ref. No.	Part No.	Part Name	Remarks
		<b>TRANSISTORS</b>	
Q1001	25C4533LP.KT		⚠
	OR 25C5130LF608		⚠
Q1002	25D1458		
Q1003	25C945A(Q)		
Q1004	25A564(Q)		
Q1005	25A733(P)		
Q1051	25C3852		⚠
	OR 25D1776(P,Q)		⚠
	OR 25D2375(P,Q)		⚠
Q1052	25C945A(TP)		AKEI
Q1250	25D1458		
Q1252	25C945A(TP)		AKEI
Q1253	25A733(TP)		AKEI
Q3002	25C945A(TP)		AKEI
Q3310	25D601(R)	CHIP	
Q3311	25B709(R)	CHIP	
Q3314	IMX1	COMPLX CMP SI NPN CHIP	
Q3315	DTA124EK	CHIP	
Q4001	25B709(R)	CHIP	
Q4002	25D601(R)	CHIP	
Q4003	25C945A(TP)		AKEI
Q4101	25C945A(TP)		AKEI
Q4151	DTC124E5		
Q4152	UN2213	CHIP	
Q5301	25B709(R)	CHIP	
Q5302	25C945A(TP)		AKEI
Q5901	25C945A(TP)		AKEI
Q5951	25A733(TP)		AKEI
Q6001	25C945A(TP)		AKEI
Q6002	25B709(R)	CHIP	
Q6003	25D601(R)	CHIP	
Q6005	25B710(R)	CHIP	
Q6006	25C945A(TP)		AKEI
Q6007	DTA143E5		
Q6008	25C945A(TP)		AKEI
Q6009(E29)	VEK55333	PHOTO SENSOR UNIT	AKEI
Q6010(E29)	VEK55333	PHOTO SENSOR UNIT	AKEI
		<b>DIODES</b>	
D1001	S1WBA40		⚠
	OR S1WBA40B		⚠
	OR S1WBA60		⚠
	OR S1WBA60B		⚠
D1002	EG01		
D1003	ERA18-04		
D1005	ERA18-04		
D1006	RU2YXLFC1		
D1007	ERA18-04		
D1008	EK13		
D1011	MA4051NH	ZENER	5.1V
D1012	MA858		
D1013	MA165		
D1015	MA2180LA	ZENER	18V ⚠
	OR 1N4746A-T	ZENER	18V ⚠
	OR 1N4746ARL	ZENER	18V ⚠
D1016	MA165		
D1051	MA4100N	ZENER	10V
D1052	MA165		
D1053	MA165		
D1250	MA4082N-M	ZENER	8.2V
D1251	MA165		
D1252	MA165		
D3301	MA357-TX	CHIP	
D3302	MA165		
D4001	MA165		
	( H, I, J, K )		
D4002	MA165		
	( H, I, J, K )		
D4151	MA4056-M	ZENER	5.6V
	( A, B, C, D, E, F, G, H, I, J )		
D4152	MA4027-L	ZENER	2.7V
	( A, B, H )		AKEI
D5501	MA4062-L	ZENER	6.2V
D5502	MA165		
D5503	MA165		
D5901	MA165		
D5902	MA165		

(E30)

Ref. No.	Part No.	Part Name	Remarks
D5903	MA165		
D5951	MA165		
D6002(E30)	VEK55334	SENSOR LED UNIT	AKEI
D6003	MA165		
D6010	MA165		
D6011	MA165		
D6201	MA165		
D6202	MA165		
D6203	MA165		
D6205	MA165		
D6206	MA165		
		<b>RESISTORS</b>	
R1003	VRESE2TJ334		1/2W 330K
R1004	ERG25JM333H	METAL OXIDE	2W 33K ⚠
	OR ERG25JS333H	METAL OXIDE	2W 33K ⚠
	OR ERG25J333H	METAL OXIDE	2W 33K ⚠
R1005	ERG15JM560P	METAL OXIDE	1W 56 ⚠
	OR ERG15JS560P	METAL OXIDE	1W 56 ⚠
	OR ERG15J560P	METAL OXIDE	1W 56 ⚠
R1006	ERDS2TJ222		2.2K
R1007	ERDS2TJ101		100
R1008	ERDS2TJ392		3.9K
R1010	ERD25FJ100P		10 ⚠
	OR ERD25FPJ100P		10 ⚠
	OR VRESF4FJ100P		10 ⚠
R1011	ERD25FJ100P		10 ⚠
	OR ERD25FPJ100P		10 ⚠
	OR VRESF4FJ100P		10 ⚠
R1014	ERDS2TJ221		220
R1015	ERDS2TJ221		220
R1016	ERDS2TJ562		5.6K
R1017	ERDS2TJ103		10K
R1018	ERDS2TJ183		18K
R1019	ERDS2TJ392		3.9K
R1020	ERDS2TJ682		6.8K
R1022	ERDS2TJ221		220
R1051	ERJ6GEYJ472V	MGF CHIP	1/10W 4.7K
R1052	ERDS2TJ153		15K
R1053	ERDS2TJ153		15K
R1250	ERG15JM270P	METAL OXIDE	1W 27 ⚠
	OR ERG15JS270P	METAL OXIDE	1W 27 ⚠
	OR ERG15J270P	METAL OXIDE	1W 27 ⚠
R1251	ERJ6GEYJ391V	MGF CHIP	1/10W 390
R1252	ERJ6GEYJ473V	MGF CHIP	1/10W 47K
R1253	ERJ6GEYJ223V	MGF CHIP	1/10W 22K
R1254	ERJ6GEYJ473V	MGF CHIP	1/10W 47K
R1255	ERJ6GEYJ562V	MGF CHIP	1/10W 5.6K
R1256	ERJ6GEYJ223V	MGF CHIP	1/10W 22K
R3004	ERJ6GEYJ102V	MGF CHIP	1/10W 1K
R3008	ERJ6GEYJ103V	MGF CHIP	1/10W 10K
R3012	ERJ6GEYJ182V	MGF CHIP	1/10W 1.8K
	( A, B, C, D, E, H, I, J )		
	ERJ6GEYJ332V	MGF CHIP	1/10W 3.3K
	( F, G, K )		
R3013	ERJ6GEYJ151V	MGF CHIP	1/10W 150
R3019	ERJ6GEYJ103V	MGF CHIP	1/10W 10K
R3020	ERJ6GEYJ223V	MGF CHIP	1/10W 22K
R3021	ERJ6GEYJ271V	MGF CHIP	1/10W 270
R3022	ERDS2TJ222		2.2K
R3023	ERJ6GEYJ102V	MGF CHIP	1/10W 1K
R3024	ERJ6GEYJ391V	MGF CHIP	1/10W 390
	( A, B, C, D, E, H, I, J )		
	ERJ6GEYJ471V	MGF CHIP	1/10W 470
	( F, G, K )		
R3025	ERJ6GEYJ181V	MGF CHIP	1/10W 180
R3027	ERJ6GEYJ332V	MGF CHIP	1/10W 3.3K
R3028	ERJ6GEYJ103V	MGF CHIP	1/10W 10K
R3029	ERJ6GEYJ474V	MGF CHIP	1/10W 470K
R3030	ERJ6GEYJ155V	MGF CHIP	1/10W 1.5M
R3031	ERJ6GEYJ471V	MGF CHIP	1/10W 470
R3032	ERJ6GEYJ682V	MGF CHIP	+-2% 1/10W 6.8K
	( A, B, C, D, E, H, I, J )		
R3033	ERJ6GEYJ472V	MGF CHIP	+-2% 1/10W 4.7K
	( A, B, C, D, E, H, I, J )		
R3034	ERJ6GEYJ392V	MGF CHIP	+-2% 1/10W 3.9K
	( A, B, C, D, E, H, I, J )		
R3035	ERJ6GEYJ682V	MGF CHIP	+-2% 1/10W 6.8K
	( A, B, C, D, E, H, I, J )		

Ref. No.	Part No.	Part Name	Remarks
R3040	ERJ6GEYJ151V	MGF CHIP 1/10W 150	
R3045	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R3046	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R3047	ERJ6GEYJ562V	MGF CHIP 1/10W 5.6K	
R3049	ERJ6GEYJ152V	MGF CHIP 1/10W 1.5K	
R3050	ERJ6GEY472V	MGF CHIP +-2% 1/10W 4.7K	
R3053	ERJ6GEYJ333V	MGF CHIP 1/10W 33K	
R3054	ERJ6GEYJ333V	MGF CHIP 1/10W 33K	
R3061	ERJ6GEYJ121V	MGF CHIP 1/10W 120	
R3063	ERJ6GEYJ123V	MGF CHIP 1/10W 12K	
	( A, B, C, D, E, H, I, J )		
	ERJ6GEYJ682V	MGF CHIP 1/10W 6.8K	
	( F, G, K )		
R3077	ERJ6GEYJ101V	MGF CHIP 1/10W 100	
R3201	ERJ6GEYJ821V	MGF CHIP 1/10W 820	
R3202	ERJ6GEY0R00V	MGF CHIP 1/10W 0	●
R3203	ERJ6GEYJ225V	MGF CHIP 1/10W 2.2M	
R3301	ERJ6GEY0R00V	MGF CHIP 1/10W 0	●
R3302	ERJ6GEY0R00V	MGF CHIP 1/10W 0	●
R3303	ERJ6GEY0R00V	MGF CHIP 1/10W 0	●
R3304	ERDS2TJ222		2.2K
R3305	ERDS2TJ222		2.2K
R3306	ERJ6GEY0R00V	MGF CHIP 1/10W 0	●
R3307	ERJ6GEYJ471V	MGF CHIP 1/10W 470	
R3308	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
	( K )		
R3309	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
	( K )		
R3310	ERJ6GEYJ223V	MGF CHIP 1/10W 22K	
R3321	ERJ6GEYJ223V	MGF CHIP 1/10W 22K	
R3325	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R3326	ERJ6GEYJ223V	MGF CHIP 1/10W 22K	
R3329	ERJ6GEYJ223V	MGF CHIP 1/10W 22K	
R3330	ERJ6GEYJ221V	MGF CHIP 1/10W 220	
R3331	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R3336	ERJ6GEYJ222V	MGF CHIP 1/10W 2.2K	
R3338	ERJ6GEYJ153V	MGF CHIP 1/10W 15K	
	( A, B, C, D, E, F, G )		
	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
	( H, I, J )		
	ERJ6GEYJ392V	MGF CHIP 1/10W 3.9K	
	( K )		
R3341	ERJ6GEYJ222V	MGF CHIP 1/10W 2.2K	
R3342	ERJ6GEYJ183V	MGF CHIP 1/10W 18K	
R3343	ERJ6GEYJ183V	MGF CHIP 1/10W 18K	
R3346	ERJ6GEYJ222V	MGF CHIP 1/10W 2.2K	
R3347	ERJ6GEYJ222V	MGF CHIP 1/10W 2.2K	
R3348	ERJ6GEYJ183V	MGF CHIP 1/10W 18K	
R3349	ERJ6GEYJ183V	MGF CHIP 1/10W 18K	
R3351	ERJ6GEYJ123V	MGF CHIP 1/10W 12K	
R3352	ERDS2TJ151		150
R3354	ERJ6GEYJ272V	MGF CHIP 1/10W 2.7K	
	( A, B, C, D, E, F, G, H, I, J )		
	ERJ6GEYJ682V	MGF CHIP 1/10W 6.8K	
	( K )		
R3355	ERJ6GEYJ472V	MGF CHIP 1/10W 4.7K	
R3356	ERJ6GEYJ472V	MGF CHIP 1/10W 4.7K	
R3357	ERJ6GEYJ472V	MGF CHIP 1/10W 4.7K	
R3358	ERJ6GEYJ472V	MGF CHIP 1/10W 4.7K	
R3359	ERJ6GEYJ472V	MGF CHIP 1/10W 4.7K	
R3361	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R3362	ERJ6GEYJ183V	MGF CHIP 1/10W 18K	
	( A, B, C, D, E, F, G )		
	ERJ6GEYJ123V	MGF CHIP 1/10W 12K	
	( H, I, J, K )		
R3363	ERJ6GEYJ562V	MGF CHIP 1/10W 5.6K	
R3365	ERJ6GEYJ152V	MGF CHIP 1/10W 1.5K	
R3366	ERJ6GEYJ182V	MGF CHIP 1/10W 1.8K	
R3367	ERJ6GEYJ182V	MGF CHIP 1/10W 1.8K	
R3368	EVNCA03B14	VARIABLE 10K	
R3369	ERJ6GEYJ104V	MGF CHIP 1/10W 100K	
R3370	ERJ6GEYJ223V	MGF CHIP 1/10W 22K	
R3372	ERJ6GEYJ152V	MGF CHIP 1/10W 1.5K	
R3375	ERJ6GEYJ223V	MGF CHIP 1/10W 22K	
R3377	ERJ6GEYJ182V	MGF CHIP 1/10W 1.8K	
R3378	ERJ6GEYJ221V	MGF CHIP 1/10W 220	
R3379	ERJ6GEYJ272V	MGF CHIP 1/10W 2.7K	
R3380	ERJ6GEYJ152V	MGF CHIP 1/10W 1.5K	
R3381	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R3390	ERJ6GEYJ222V	MGF CHIP 1/10W 2.2K	

Ref. No.	Part No.	Part Name	Remarks
R4001	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R4002	ERJ6GEYJ334V	MGF CHIP 1/10W 330K	
R4003	ERJ6GEYJ221V	MGF CHIP 1/10W 220	
R4004	ERJ6GEYJ333V	MGF CHIP 1/10W 33K	
R4005	ERJ6GEYJ225V	MGF CHIP 1/10W 2.2M	
R4006	ERJ6GEYJ681V	MGF CHIP 1/10W 680	
R4007	ERJ6GEYJ821V	MGF CHIP 1/10W 820	
R4008	ERJ6GEYJ223V	MGF CHIP +-2% 1/10W 22K	
R4009	ERJ6GEYJ473V	MGF CHIP 1/10W 47K	
R4010	ERJ6GEYJ473V	MGF CHIP 1/10W 47K	
R4011	ERJ6GEYJ822V	MGF CHIP 1/10W 8.2K	
R4012	ERJ6GEYJ682V	MGF CHIP 1/10W 6.8K	
R4014	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R4015	ERJ6GEYJ222V	MGF CHIP 1/10W 2.2K	
R4018	ERJ6GEYJ682V	MGF CHIP 1/10W 6.8K	
R4019	ERDS2TJ473		47K
R4020	ERD21LL0	CHIP 1/8W 0	●
	( A, B, C, D, E, F, G )		
	ERJ6GEY0R00V	MGF CHIP 1/10W 0	●
	( H, I, J )		
R4021	ERDS2TJ473		47K
R4030	ERJ6GEYJ393V	MGF CHIP 1/10W 39K	
R4031	ERJ6GEYJ561V	MGF CHIP 1/10W 560	
R4101	ERJ6GEY473V	MGF CHIP +-2% 1/10W 47K	
R4102	ERJ6GEYJ394V	MGF CHIP 1/10W 390K	
R4103	ERJ6GEYJ153V	MGF CHIP 1/10W 15K	
R4151	ERJ6GEYJ561V	MGF CHIP 1/10W 560	
	( A, B, C, D, E, F, G, H, I, J )		
R4152	ERDS2TJ221		220
	( A, B, C, D, E, F, G, H, I, J )		
R4153	ERJ6GEYJ823V	MGF CHIP 1/10W 82K	
	( A, B, C, D, E, F, G, H, I, J )		
R4155	ERJ6GEYJ272V	MGF CHIP 1/10W 2.7K	
	( A, B, C, D, E, F, G, H, I, J )		
R4156	ERQ1ABJP8R2S	FUSE 1W 8.2	△
	( A, B, C, D, E, F, G, H, I, J )		
R4157	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
	( A, B, C, D, E, F, G, H, I, J )		
R4158	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
	( A, B, C, D, E, F, G, H, I, J )		
R4159	ERDS2TJ100		10
	( A, B, C, D, E, F, G, H, I, J )		
R4160	ERJ6GEYJ122V	MGF CHIP 1/10W 1.2K	
	( A, B, C, D, E, F, G )		
	ERJ6GEYJ391V	MGF CHIP 1/10W 390	
	( H, I, J )		
R4161	ERJ6GEYJ822V	MGF CHIP 1/10W 8.2K	
	( A, B, C, D, E, F, G )		
	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
	( H, I, J )		
R4162	ERJ6GEYJ223V	MGF CHIP 1/10W 22K	
R4171	ERJ6GEYJ822V	MGF CHIP 1/10W 8.2K	
R5301	ERJ6GEYJ221V	MGF CHIP 1/10W 220	
R5302	ERDS2TJ331		330
R5303	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
	( A, B, C, D, E, F, G, H, I, J )		
	ERJ6GEYJ122V	MGF CHIP 1/10W 1.2K	
	( K )		
R5304	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R5305	ERJ6GEYJ274V	MGF CHIP 1/10W 270K	
R5306	ERJ6GEYJ473V	MGF CHIP 1/10W 47K	
R5307	ERJ6GEY0R00V	MGF CHIP 1/10W 0	●
R5311	ERDS2TJ221		220
R5312	ERDS2TJ221		220
R5313	ERDS2TJ221		220
R5314	ERJ6GEYJ101V	MGF CHIP 1/10W 100	
R5315	ERJ6GEYJ101V	MGF CHIP 1/10W 100	
R5316	ERJ6GEYJ101V	MGF CHIP 1/10W 100	
R5317	ERJ6GEYJ101V	MGF CHIP 1/10W 100	
R5325	EVNCA03B13	VARIABLE 1K	
R5401	ERJ6GEYJ391V	MGF CHIP 1/10W 390	
R5402	ERJ6GEYJ224V	MGF CHIP 1/10W 220K	
R5403	ERJ6GEYJ221V	MGF CHIP 1/10W 220	
R5404	ERJ6GEYJ224V	MGF CHIP 1/10W 220K	
	( A, B, C, D, E, F, G )		
	ERJ6GEYJ334V	MGF CHIP 1/10W 330K	
	( H, I, J, K )		
R5405	ERJ6GEYJ332V	MGF CHIP 1/10W 3.3K	
R5406	ERJ6GEYJ101V	MGF CHIP 1/10W 100	
R5501	ERJ6GEYJ471V	MGF CHIP 1/10W 470	

Ref. No.	Part No.	Part Name	Remarks
R5502	ERJ6GEYJ224V	MGF CHIP 1/10W 220K	
R5504	ERJ6GEYJ101V	MGF CHIP 1/10W 100	
R5505	ERJ6ENF3241V	MGF CHIP +-1% 1/10W 3.24K	▲ AKEI
R5506	ERJ6GEYJ681V	MGF CHIP 1/10W 680	
R5507	ERJ6GEYJ821V	MGF CHIP 1/10W 820	
	( A,B,C,D,E,F,G )		
	ERJ6GEY0R00V	MGF CHIP 1/10W 0	●
	( H,I,J,K )		
R5508	ERJ6GEYJ561V	MGF CHIP 1/10W 560	
R5510	ERJ6GEYJ101V	MGF CHIP 1/10W 100	
R5511	ERJ6GEYJ222V	MGF CHIP 1/10W 2.2K	
R5512	ERJ6GEYJ151V	MGF CHIP 1/10W 150	
R5513	ERJ6GEYJ682V	MGF CHIP 1/10W 6.8K	
R5514	ERJ6GEYJ105V	MGF CHIP 1/10W 1M	
R5520	ERDS2TJ471	470	
R5601	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R5901	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R5902	ERJ6GEYJ332V	MGF CHIP 1/10W 3.3K	
R5903	ERJ6GEYJ682V	MGF CHIP 1/10W 6.8K	
R5904	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R5905	ERJ6GEYJ683V	MGF CHIP 1/10W 68K	
R5906	ERJ6GEYJ273V	MGF CHIP 1/10W 27K	
R5907	EVNCAA03B24	VARIABLE 20K	
R5908	ERJ6GEYJ682V	MGF CHIP 1/10W 6.8K	
R5910	ERJ6GEYJ333V	MGF CHIP 1/10W 33K	
R5911	ERJ6GEYJ393V	MGF CHIP 1/10W 39K	
R5912	ERJ6GEYJ104V	MGF CHIP 1/10W 100K	
R5913	ERJ6GEYJ123V	MGF CHIP 1/10W 12K	
R5915	ERJ6GEYJ333V	MGF CHIP 1/10W 33K	
R5916	ERJ6GEYJ273V	MGF CHIP 1/10W 27K	
R5917	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R5918	ERJ6GEYJ152V	MGF CHIP 1/10W 1.5K	
R5920	ERJ6GEYJ473V	MGF CHIP 1/10W 47K	
	( A,B,C,D,E,F,G,H,I,J )		
	ERJ6GEYJ563V	MGF CHIP 1/10W 56K	
	( K )		
R5921	ERJ6GEYJ563V	MGF CHIP 1/10W 56K	
R5922	ERDS2TJ564	560K	
R5923	ERJ6GEYJ273V	MGF CHIP 1/10W 27K	
R5924	ERDS2TJ394	390K	
R5925	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R5926	ERJ6GEYJ273V	MGF CHIP 1/10W 27K	
R5927	EVNCAA03B14	VARIABLE 10K	
R5928	ERJ6GEYJ562V	MGF CHIP 1/10W 5.6K	
R5931	ERJ6GEYJ472V	MGF CHIP 1/10W 4.7K	
R5932	ERJ6GEYJ472V	MGF CHIP 1/10W 4.7K	
R5934	ERDS2TJ101	100	
R5951	ERJ6GEYJ472V	MGF CHIP 1/10W 4.7K	
R5952	ERJ6GEYJ473V	MGF CHIP 1/10W 47K	
R5953	ERJ6GEYJ223V	MGF CHIP 1/10W 22K	
R6001	ERDS2TJ471	470	
R6002	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R6003	ERDS2TJ332	3.3K	
R6004	ERDS2TJ471	470	
R6005	ERDS2TJ471	470	
R6006	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R6007	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R6009	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R6010	ERJ6GEYJ272V	MGF CHIP 1/10W 2.7K	
R6011	ERJ6GEYJ272V	MGF CHIP 1/10W 2.7K	
R6012	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R6013	ERJ6GEYJ272V	MGF CHIP 1/10W 2.7K	
R6014	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R6016	ERJ6GEYJ223V	MGF CHIP 1/10W 22K	
	( A,B,C,D,E,H,I,J )		
R6017	ERJ6GEYJ222V	MGF CHIP 1/10W 2.2K	
R6019	ERJ6GEYJ223V	MGF CHIP 1/10W 22K	
R6020	ERDS2TJ223	22K	
	( A,B,C,D,E,F,G,H,I,J )		
R6021	ERJ6GEYJ223V	MGF CHIP 1/10W 22K	
R6023	ERJ6GEYJ563V	MGF CHIP 1/10W 56K	
R6024	ERJ6GEYJ563V	MGF CHIP 1/10W 56K	
R6025	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R6026	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R6027	ERX2SJ3R9P	METAL FILM 2W 3.9	▲ AKEI
R6029	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R6030	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R6031	ERJ6GEYJ332V	MGF CHIP 1/10W 3.3K	
R6034	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R6036	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	

Ref. No.	Part No.	Part Name	Remarks
R6037	ERDS2TJ391	390	
R6038	ERDS2TJ560	56	
R6039	ERJ6GEYJ223V	MGF CHIP 1/10W 22K	
	( A,B,C,D,E,H,I,J )		
R6040	ERDS2TJ223	22K	
R6041	ERDS2TJ223	22K	
R6042	ERDS2TJ223	22K	
R6043	ERDS2TJ223	22K	
R6044	ERJ6GEYJ223V	MGF CHIP 1/10W 22K	
R6045	ERJ6GEYJ223V	MGF CHIP 1/10W 22K	
R6046	ERJ6GEYJ223V	MGF CHIP 1/10W 22K	
R6047	ERDS2TJ223	22K	
R6048	ERDS2TJ102	1K	
R6049	ERDS2TJ102	1K	
R6050	ERDS2TJ102	1K	
R6051	ERDS2TJ102	1K	
R6052	ERJ6GEYJ223V	MGF CHIP 1/10W 22K	
R6053	ERJ6GEYJ223V	MGF CHIP 1/10W 22K	
R6054	ERJ6GEYJ223V	MGF CHIP 1/10W 22K	
R6055	ERJ6GEYJ223V	MGF CHIP 1/10W 22K	
R6056	ERJ6GEYJ223V	MGF CHIP 1/10W 22K	
R6057	ERJ6GEYJ223V	MGF CHIP 1/10W 22K	
	( F,G,K )		
R6058	ERJ6GEYJ223V	MGF CHIP 1/10W 22K	
R6059	ERJ6GEYJ182V	MGF CHIP 1/10W 1.8K	
R6060	ERJ6GEYJ475V	MGF CHIP 1/10W 4.7M	
R6061	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R6062	ERJ6GEYJ224V	MGF CHIP 1/10W 220K	
	( F,G,K )		
R6063	ERJ6GEYJ153V	MGF CHIP 1/10W 15K	
	( F,G,K )		
R6064	ERJ6GEYJ153V	MGF CHIP 1/10W 15K	
	( F,G,K )		
R6065	ERJ6GEYJ223V	MGF CHIP 1/10W 22K	
R6066	ERJ6GEYJ223V	MGF CHIP 1/10W 22K	
R6068	ERJ6GEYJ473V	MGF CHIP 1/10W 47K	
R6069	ERJ6GEYJ683V	MGF CHIP 1/10W 68K	
R6070	ERDS2TJ683	68K	
R6071	ERDS2TJ821	820	
R6073	ERJ6GEYJ473V	MGF CHIP 1/10W 47K	
R6076	ERDS2TJ562	5.6K	
R6077	ERDS2TJ331	330	
R6080	ERDS2TJ223	22K	
R6084	ERDS2TJ472	4.7K	
R6085	ERJ6GEYJ223V	MGF CHIP 1/10W 22K	
R6091	ERJ6GEYJ223V	MGF CHIP 1/10W 22K	
R6092	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R6093	ERJ6GEYJ223V	MGF CHIP 1/10W 22K	
R6094	ERJ6GEYJ223V	MGF CHIP 1/10W 22K	
R6095	ERJ6GEYJ223V	MGF CHIP 1/10W 22K	
R6096	ERJ6GEYJ223V	MGF CHIP 1/10W 22K	
R6098	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R6100	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R6101	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R6103	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R6104	ERDS2TJ223	22K	
	( K )		
R6109	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R6110	ERJ6GEYJ101V	MGF CHIP 1/10W 100	
R6111	ERDS2TJ223	22K	
	( A,B,C,D,E,I,J )		
R6112	ERDS2TJ223	22K	
	( F,G,H,K )		
R6115	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R6116	ERJ6GEYJ563V	MGF CHIP 1/10W 56K	
R6117	ERJ6GEYJ223V	MGF CHIP 1/10W 22K	
	( A,B,C,D,E,F,G,H,I,J )		
R6118	ERJ6GEYJ223V	MGF CHIP 1/10W 22K	
	( K )		
R6120	ERJ6GEYJ223V	MGF CHIP 1/10W 22K	
R6121	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R6193	ERDS2TJ102	1K	
R6196	ERDS2TJ102	1K	
	( K )		
R6197	ERDS2TJ102	1K	
	( K )		
R6198	ERJ6GEYJ101V	MGF CHIP 1/10W 100	
R6199	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R6201	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R6202	ERJ6GEYJ333V	MGF CHIP 1/10W 33K	







(E29, E45, E71, E77, E78, E79)

Ref. No.	Part No.	Part Name	Remarks
		<b>COILS</b>	
L1001	ELF18D290A	29	▲
	OR ELF18D290A-P	29	▲
	OR VLQ50157	29	▲
L1002	VLQ57A220M	+ -20%	22
L1003	VLQ57A9R0M	+ -20%	9
L1006	VLPS0005A		22
L3001	ELESN680KA		68
L3002	ELESN220KA		22
L3003	ELESN680KA		68
L3004	ELESN330KA		33
L3005	ELESN180KA		18
L3010	ELESN101KA		100
L3206	ELESN470KA		47
L3301	VLQSH02R5R6J	+ -5%	5.6 AKEI
L3302	ELESN101KA		100
L4001	VLQSV11D153K		15M AKEI
L4002	ELESN101KA		100
L4003	VLQSH02R120K		12
	( A, B, C, D, E, F, G )		
	VLQSH02R180K		18
	( H, I, J, K )		
L4101	ELESN471KA		470
L5501	ELESN101KA		100
L6001	ELESN4R7KA		4.7
		<b>CRYSTAL OSCILLATOR</b>	
X3001	VXS0195		
X3301	VXS0207		AKEI
X5501	CSB503F38		
X5601	VXS0190		
X6002	VXS0191		
		<b>PIN HEADERS</b>	
P1002	VEKS5448	P801 CONNECTOR ASS'Y	AKEI
P3001	VJPS0765	CONNECTOR PLUG 7P	AKEI
P3003	VJPS0740		22P AKEI
P3004	VJPS0275		5P
	( A, B, H, K )		
P3005	VJPS0766	CONNECTOR PLUG 11P	AKEI
P4001	VJSS0822		14P AKEI
	( K )		
P4152	VJPS0268		2P
	( A, B, C, D, E, F, G, H, I, J )		
P4153	VJPS0273		3P
	( A, B, H )		
P5501	VJPS0768	CONNECTOR PLUG 19P	AKEI
P5502	VJPS0275		5P
P6001	VJSS0234		12P
P6002	VJPS0268		2P
P6201	VJPS0740		22P AKEI
		<b>SWITCHES</b>	
SW5301	VSSS0093	SERVICE SWITCH	AKEI
		<b>FUSE &amp; PROTECTOR</b>	
F1001	VSFS0003A16	FUSE 125V 1.6A	▲
	OR VSFS0012A16	FUSE 125V 1.6A	▲
	OR VSFS0028A16	FUSE 125V 1.6A	▲
	OR XBA1C16NU100	FUSE 125V 1.6A	▲
PR1001	ICP-F38	IC PROTECTOR	1.5A ▲
	OR ICP-F38-1	IC PROTECTOR	1.5A ▲
	OR UN10015	IC PROTECTOR	1.5A ▲
	OR VSFS0029D25	IC PROTECTOR	1.5A ▲
PR1050	ICP-F38	IC PROTECTOR	1.5A ▲
	OR ICP-F38-1	IC PROTECTOR	1.5A ▲
	OR UN10015	IC PROTECTOR	1.5A ▲
	OR VSFS0029D25	IC PROTECTOR	1.5A ▲
		<b>TRANSFORMER</b>	
T1001	ETS28AD1FSAC		▲
	OR VTPS0033		▲
T4101	VLTS0304		

Ref. No.	Part No.	Part Name	Remarks
		<b>MISCELLANEOUS</b>	
E71	VJSS3325	FUSE HOLDER	AKEI
E77	VMXS0871	SPACER	
E78	VSCS2055	SHIELD CASE BODY	AKEI
E79	VSCS2056	SHIELD CASE BOTTOM	AKEI
E45	VMTS0035	CUSHION	
		<b>MAIN C.B.A. ( L )</b>	■
		<b>INTEGRATED CIRCUITS</b>	
IC3001	AN3459NFBP	IC BIPOLAR LINEAR VIDEO/AUDIO PROCESS	
IC3002	NJM2246M-T1	IC BIPOLAR LINEAR INPUT SELECT	
IC3201	MN3870S	IC MOS LOGIC CCD 1H DELAY	E. S. D.
IC3301	LC8643125957	IC MOS LOGIC OSD/CCV	E. S. D. AKEI
IC5301	ANS366FB	IC BIPOLAR LINEAR Y/C SIGNAL PROCESS	
IC6001	MN6750647A3E	IC MOS LOGIC SYSTEM CTL/SERVO /TIMER	E. S. D.
IC6002	VEKS5335	REEL SENSOR UNIT	AKEI
IC6003	TA7291S	IC BIPOLAR LINEAR LOADING MOTOR DRIVE	
IC9001	VCRS0199	HIC MTS/SAP AUDIO PROCESS	
		<b>TRANSISTORS</b>	
Q1051	2SC3852		▲
	OR 2SD1776(P, Q)		▲
	OR 2SD2375(P, Q)		▲
Q1052	2SC945A(TP)		AKEI
Q1250	2SD1458		
Q1252	2SD601(R)	CHIP	
Q1253	2SB709(R)	CHIP	
Q3002	2SD601(R)	CHIP	
Q3003	DTC124EK	CHIP	
Q3005	2SB709(R)	CHIP	
Q3310	2SD601(R)	CHIP	
Q3311	2SB709(R)	CHIP	
Q3314	IMX1	COMPLX CMP SI NPN CHIP	
Q3315	DTA124EK	CHIP	
Q4001	2SA733(TP)		AKEI
Q4002	2SC945A(TP)		AKEI
Q4003	2SC945A(TP)		AKEI
Q4005	DTC124ES		
Q4006	UN2213	CHIP	
Q4101	2SC945A(TP)		AKEI
Q4302	DTC144ES		
Q5301	2SB709(R)	CHIP	
Q5302	2SD601(R)	CHIP	
Q5901	2SD601(R)	CHIP	
Q5951	2SA733(TP)		AKEI
Q6001	2SC945A(TP)		AKEI
Q6002	2SB709(R)	CHIP	
Q6003	2SD601(R)	CHIP	
Q6005	2SB710(R)	CHIP	
Q6006	2SD601(R)	CHIP	
Q6007	DTA143EK	CHIP	
Q6008	2SD601(R)	CHIP	
Q6009(E29)	VEKS5333	PHOTO SENSOR UNIT	AKEI
Q6010(E29)	VEKS5333	PHOTO SENSOR UNIT	AKEI
		<b>DIODES</b>	
D1051	MA4100N	ZENER 10V	
D1052	MA165		
D1053	MA165		
D1250	MA4082N-M	ZENER 8.2V	AKEI
D1251	MA165		
D1252	MA165		
D3301	MA357-TX	CHIP	AKEI
D3302	MA165		
D3304	MA4062-M	ZENER 6.2V	
D4301	MA165		
D4302	MA165		
D5501	MA4062-L	ZENER 6.2V	



Ref. No.	Part No.	Part Name	Remarks
R5316	ERJ6GEYJ101V	MGF CHIP 1/10W 100	
R5317	ERJ6GEYJ101V	MGF CHIP 1/10W 100	
R5319	ERJ6GEYJ393V	MGF CHIP 1/10W 39K	
R5325	EVNCA03813	VARIABLE 1K	
R5401	ERJ6GEYJ391V	MGF CHIP 1/10W 390	
R5402	ERJ6GEYJ224V	MGF CHIP 1/10W 220K	
R5403	ERJ6GEYJ221V	MGF CHIP 1/10W 220	
R5404	ERJ6GEYJ224V	MGF CHIP 1/10W 220K	
R5405	ERJ6GEYJ332V	MGF CHIP 1/10W 3.3K	
R5406	ERJ6GEYJ101V	MGF CHIP 1/10W 100	
R5501	ERJ6GEYJ471V	MGF CHIP 1/10W 470	
R5502	ERJ6GEYJ224V	MGF CHIP 1/10W 220K	
R5504	ERJ6GEYJ101V	MGF CHIP 1/10W 100	
R5505	ERJ6ENF3241V	MGF CHIP +-1% 1/10W 3.24K	▲ AKEI
R5506	ERJ6GEYJ681V	MGF CHIP 1/10W 680	
R5507	ERJ6GEY0R00V	MGF CHIP 1/10W 0	●
R5508	ERJ6GEYJ561V	MGF CHIP 1/10W 560	
R5510	ERJ6GEYJ101V	MGF CHIP 1/10W 100	
R5511	ERJ6GEYJ222V	MGF CHIP 1/10W 2.2K	
R5512	ERJ6GEYJ151V	MGF CHIP 1/10W 150	
R5513	ERJ6GEYJ682V	MGF CHIP 1/10W 6.8K	
R5514	ERJ6GEYJ105V	MGF CHIP 1/10W 1M	
R5520	ERDS2TJ471	470	
R5601	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R5901	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R5902	ERJ6GEYJ332V	MGF CHIP 1/10W 3.3K	
R5903	ERJ6GEYJ682V	MGF CHIP 1/10W 6.8K	
R5904	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R5905	ERJ6GEYJ683V	MGF CHIP 1/10W 68K	
R5906	ERJ6GEYJ273V	MGF CHIP 1/10W 27K	
R5907	EVNCA03824	VARIABLE 20K	
R5908	ERJ6GEYJ682V	MGF CHIP 1/10W 6.8K	
R5910	ERJ6GEYJ333V	MGF CHIP 1/10W 33K	
R5911	ERJ6GEYJ393V	MGF CHIP 1/10W 39K	
R5912	ERJ6GEYJ104V	MGF CHIP 1/10W 100K	
R5913	ERJ6GEYJ123V	MGF CHIP 1/10W 12K	
R5915	ERJ6GEYJ333V	MGF CHIP 1/10W 33K	
R5916	ERJ6GEYJ273V	MGF CHIP 1/10W 27K	
R5917	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R5918	ERJ6GEYJ152V	MGF CHIP 1/10W 1.5K	
R5920	ERJ6GEYJ563V	MGF CHIP 1/10W 56K	
R5921	ERJ6GEYJ563V	MGF CHIP 1/10W 56K	
R5922	ERDS2TJ564	560K	
R5923	ERJ6GEYJ273V	MGF CHIP 1/10W 27K	
R5924	ERDS2TJ334	330K	
R5925	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R5926	ERJ6GEYJ273V	MGF CHIP 1/10W 27K	
R5927	EVNCA03814	VARIABLE 10K	
R5928	ERJ6GEYJ562V	MGF CHIP 1/10W 5.6K	
R5931	ERJ6GEYJ472V	MGF CHIP 1/10W 4.7K	
R5932	ERJ6GEYJ472V	MGF CHIP 1/10W 4.7K	
R5934	ERJ6GEYJ101V	MGF CHIP 1/10W 100	
R5951	ERJ6GEYJ472V	MGF CHIP 1/10W 4.7K	
R5952	ERJ6GEYJ473V	MGF CHIP 1/10W 47K	
R5953	ERJ6GEYJ223V	MGF CHIP 1/10W 22K	
R6001	ERDS2TJ471	470	
R6002	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R6003	ERJ6GEYJ332V	MGF CHIP 1/10W 3.3K	
R6004	ERDS2TJ471	470	
R6005	ERDS2TJ471	470	
R6006	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R6007	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R6009	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R6010	ERJ6GEYJ272V	MGF CHIP 1/10W 2.7K	
R6011	ERJ6GEYJ272V	MGF CHIP 1/10W 2.7K	
R6012	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R6013	ERJ6GEYJ272V	MGF CHIP 1/10W 2.7K	
R6014	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R6016	ERJ6GEYJ223V	MGF CHIP 1/10W 22K	
R6017	ERDS2TJ222	2.2K	
R6019	ERJ6GEYJ223V	MGF CHIP 1/10W 22K	
R6020	ERJ6GEYJ223V	MGF CHIP 1/10W 22K	
R6021	ERJ6GEYJ223V	MGF CHIP 1/10W 22K	
R6023	ERJ6GEYJ563V	MGF CHIP 1/10W 56K	
R6024	ERJ6GEYJ563V	MGF CHIP 1/10W 56K	
R6025	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R6026	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R6027	ERX2S3R9P	METAL FILM 2W 3.9	▲ AKEI
R6029	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R6030	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	

Ref. No.	Part No.	Part Name	Remarks
R6031	ERJ6GEYJ332V	MGF CHIP 1/10W 3.3K	
R6034	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R6036	ERDS2TJ102	1K	
R6037	ERJ6GEYJ391V	MGF CHIP 1/10W 390	
R6038	ERDS2TJ560	56	
R6039	ERJ6GEYJ223V	MGF CHIP 1/10W 22K	
R6040	ERDS2TJ223	22K	
R6041	ERDS2TJ223	22K	
R6042	ERDS2TJ223	22K	
R6043	ERDS2TJ223	22K	
R6044	ERJ6GEYJ223V	MGF CHIP 1/10W 22K	
R6045	ERJ6GEYJ223V	MGF CHIP 1/10W 22K	
R6046	ERJ6GEYJ223V	MGF CHIP 1/10W 22K	
R6047	ERDS2TJ223	22K	
R6048	ERDS2TJ102	1K	
R6049	ERDS2TJ102	1K	
R6050	ERDS2TJ102	1K	
R6051	ERDS2TJ102	1K	
R6052	ERJ6GEYJ223V	MGF CHIP 1/10W 22K	
R6053	ERJ6GEYJ223V	MGF CHIP 1/10W 22K	
R6054	ERJ6GEYJ223V	MGF CHIP 1/10W 22K	
R6055	ERJ6GEYJ223V	MGF CHIP 1/10W 22K	
R6056	ERJ6GEYJ223V	MGF CHIP 1/10W 22K	
R6058	ERDS2TJ223	22K	
R6059	ERJ6GEYJ182V	MGF CHIP 1/10W 1.8K	
R6060	ERJ6GEYJ475V	MGF CHIP 1/10W 4.7M	
R6061	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R6065	ERJ6GEYJ223V	MGF CHIP 1/10W 22K	
R6066	ERJ6GEYJ223V	MGF CHIP 1/10W 22K	
R6068	ERJ6GEYJ473V	MGF CHIP 1/10W 47K	
R6069	ERJ6GEYJ683V	MGF CHIP 1/10W 68K	
R6070	ERDS2TJ683	68K	
R6071	ERDS2TJ821	820	
R6073	ERJ6GEYJ473V	MGF CHIP 1/10W 47K	
R6076	ERDS2TJ562	5.6K	
R6077	ERDS2TJ331	330	
R6080	ERJ6GEYJ223V	MGF CHIP 1/10W 22K	
R6084	ERJ6GEYJ472V	MGF CHIP 1/10W 4.7K	
R6085	ERDS2TJ223	22K	
R6091	ERJ6GEYJ223V	MGF CHIP 1/10W 22K	
R6092	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R6093	ERJ6GEYJ223V	MGF CHIP 1/10W 22K	
R6094	ERJ6GEYJ223V	MGF CHIP 1/10W 22K	
R6095	ERJ6GEYJ223V	MGF CHIP 1/10W 22K	
R6096	ERJ6GEYJ223V	MGF CHIP 1/10W 22K	
R6098	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R6100	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R6101	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R6103	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R6109	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R6110	ERJ6GEYJ101V	MGF CHIP 1/10W 100	
R6111	ERJ6GEYJ223V	MGF CHIP 1/10W 22K	
R6115	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R6116	ERJ6GEYJ563V	MGF CHIP 1/10W 56K	
R6118	ERJ6GEYJ223V	MGF CHIP 1/10W 22K	
R6120	ERJ6GEYJ223V	MGF CHIP 1/10W 22K	
R6121	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R6196	ERDS2TJ102	1K	
R6197	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R6198	ERJ6GEYJ101V	MGF CHIP 1/10W 100	
R6199	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R6201	ERJ6GEYJ103V	MGF CHIP 1/10W 10K	
R6202	ERJ6GEYJ333V	MGF CHIP 1/10W 33K	
R6203	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R6204	ERJ6GEYJ243V	MGF CHIP 1/10W 24K	
R6205	ERJ6GEYJ123V	MGF CHIP 1/10W 12K	
R6206	ERJ6GEYJ223V	MGF CHIP 1/10W 22K	
R6207	ERJ6GEYJ823V	MGF CHIP 1/10W 82K	
R6208	ERJ6GEYJ224V	MGF CHIP 1/10W 220K	
R6210	ERJ6GEYJ221V	MGF CHIP 1/10W 220	
R6211	ERJ6GEYJ332V	MGF CHIP 1/10W 3.3K	
R6212	ERJ6GEYJ473V	MGF CHIP 1/10W 47K	
R6213	EVNCA03815	VARIABLE 100K	
R6214	ERJ6GEYJ394V	MGF CHIP 1/10W 390K	
R6215	ERJ6GEYJ154V	MGF CHIP 1/10W 150K	
R6216	ERJ6GEYJ222V	MGF CHIP 1/10W 2.2K	
R6218	ERJ6GEYJ184V	MGF CHIP 1/10W 180K	
R6219	ERJ6GEYJ394V	MGF CHIP 1/10W 390K	
R6220	ERJ6GEYJ472V	MGF CHIP 1/10W 4.7K	
R6221	ERJ6GEYJ221V	MGF CHIP 1/10W 220	



(E10,E77, E78, E79)

Ref. No.	Part No.	Part Name	Remarks
C5516	ECUV1E473KBN	C CHIP 25V 0.047	
C5601	ECUV1H103ZFN	C CHIP +80%-20% 50V 0.01	
C5602	VCYSBRC104MX	CERAMIC +-20% 16V 0.1	
C5603	ECUV1H150JCN	C CHIP +-5% 50V 15P	
C5902	ECUV1H103ZFN	C CHIP +80%-20% 50V 0.01	
C5903	ECEA1CKA470	ELECTROLYTIC 16V 47	
C5904	ECEA1EKA4R7	ELECTROLYTIC 25V 4.7	
C5905	ECEA1HKA010	ELECTROLYTIC 50V 1	
C5951	ECEA1CKA101	ELECTROLYTIC 16V 100	
C6005	ECUV1H150JCN	C CHIP +-5% 50V 15P	
C6006	ECUV1H150JCN	C CHIP +-5% 50V 15P	
C6008	ECUV1E104ZFN	C CHIP +80%-20% 25V 0.1	
C6009	ECUV1H101JCN	C CHIP +-5% 50V 100P	
C6010	ECUV1H101JCN	C CHIP +-5% 50V 100P	
C6011	ECEA0JKA471	ELECTROLYTIC 6.3V 470	
C6012	ECUV1E104ZFN	C CHIP +80%-20% 25V 0.1	
C6016	ECEA1CKA100	ELECTROLYTIC 16V 10	
C6019	ECEA0JKA101	ELECTROLYTIC 6.3V 100	
C6020	ECUV1H102KBN	C CHIP 50V 0.001	
C6029	ECEA0JKA470	ELECTROLYTIC 6.3V 47	
C6033	ECUV1H101JCN	C CHIP +-5% 50V 100P	
C6034	ECUV1H101JCN	C CHIP +-5% 50V 100P	
C6036	ECUV1H102KBN	C CHIP 50V 0.001	
C6110	ECUV1E104KBN	C CHIP 25V 0.1	
C6115	ECUV1E104ZFN	C CHIP +80%-20% 25V 0.1	
C6201	ECEA0JKA330	ELECTROLYTIC 6.3V 33	
C6202	ECEA0JKA330	ELECTROLYTIC 6.3V 33	
C6203	ECUV1H103ZFN	C CHIP +80%-20% 50V 0.01	
C6204	ECUV1H103KBN	C CHIP 50V 0.01	
C6205	ECUV1H102KBN	C CHIP 50V 0.001	
C6206	ECUV1H103KBN	C CHIP 50V 0.01	
C6207	ECQB1H393KF	POLYESTER 50V 0.039	
C6208	ECEA1HKA010	ELECTROLYTIC 50V 1	
C6209	ECEA1EKA4R7	ELECTROLYTIC 25V 4.7	
C6211	ECUV1H272KBN	C CHIP 50V 0.0027	
C6212	ECUV1E104KBN	C CHIP 25V 0.1	
C6213	ECUV1H151KN	C CHIP 50V 150P	
C6214	ECUV1H272KBN	C CHIP 50V 0.0027	
C6215	ECEA1HKA2R2	ELECTROLYTIC 50V 2.2	
C6216	ECEA1HKA2R2	ELECTROLYTIC 50V 2.2	
C6218	ECEA1CKA100	ELECTROLYTIC 16V 10	
C6219	ECEA0JKA220	ELECTROLYTIC 6.3V 22	
C6220	ECUV1H102KBN	C CHIP 50V 0.001	
C6221	ECEA0JKA220	ELECTROLYTIC 6.3V 22	
C6222	ECUV1H272KBN	C CHIP 50V 0.0027	
C6223	ECUV1H103ZFN	C CHIP +80%-20% 50V 0.01	
C6224	ECEA0JKA221	ELECTROLYTIC 6.3V 220	
C6225	ECUV1E104ZFN	C CHIP +80%-20% 25V 0.1	
C6226	VCYSBRC104MX	CERAMIC +-20% 16V 0.1	
C6227	ECUV1H472KBN	C CHIP 50V 0.0047	
C6228	ECUV1E104KBN	C CHIP 25V 0.1	
		<b>FILTERS</b>	
FL5301	EIK7EM002Q		AKEI
		<b>COILS</b>	
L3001	ELESN680KA	68	
L3002	ELESN220KA	22	
L3003	ELESN680KA	68	
L3004	ELESN330KA	33	
L3005	ELESN180KA	18	
L3010	ELESN101KA	100	
L3014	ELESN101KA	100	
L3206	ELESN470KA	47	
L3301	VLQSH02R5R6J	+ -5% 5.6	AKEI
L3302	ELESN101KA	100	
L4001	VLQSV11D153K	15M	AKEI
L4002	ELESN101KA	100	
L4004	VLQSH02R6R8K	6.8	
L4101	ELESN471KA	470	
L5501	ELESN101KA	100	
L6001	ELESN4R7KA	4.7	
		<b>CRYSTAL OSCILLATOR</b>	
X3001	VSXS0195		
X3301	VSXS0207		AKEI
X5501	CSB503F38		

Ref. No.	Part No.	Part Name	Remarks
X5601	VSXS0190		
X6002	VSXS0191		
		<b>PIN HEADERS</b>	
P1201	VJSS0339		8P
P3001	VJPS0743	CONNECTOR PLUG 7P	AKEI
P3003	VJPS0740		22P
P3005	VJPS0744	CONNECTOR PLUG 11P	AKEI
P4001	VEKS5391	P204 CONNECTOR ASS'Y	AKEI
P5501	VJPS0768	CONNECTOR PLUG 19P	AKEI
P6001	VJSS0234		12P
P6002	VJPS0268		2P
P6201	VJPS0740		22P
		<b>SWITCHES</b>	
SWS301	VSSS0093	SERVICE SWITCH	AKEI
		<b>FUSE &amp; PROTECTOR</b>	
PR1050	ICP-F38	IC PROTECTOR 1.5A	▲
	OR ICP-F38-1	IC PROTECTOR 1.5A	▲
	OR UN10015	IC PROTECTOR 1.5A	▲
	OR VSF50029D25	IC PROTECTOR 1.5A	▲
		<b>TRANSFORMER</b>	
T4101	VLTS0304		
		<b>PRINTED CIRCUIT BOARD ASSEMBLY</b>	
E10	VEPS4009A1	TV STEREO C. B. A.	▲ E. S. D. AKEI
		<b>MISCELLANEOUS</b>	
E77	VMXS0871	SPACER	
E78	VSCS2055	SHIELD CASE BODY	AKEI
E79	VSCS2056	SHIELD CASE BOTTOM	AKEI
		<b>TV STEREO C.B.A.</b>	▲
		<b>( L )</b>	
		<b>INTEGRATED CIRCUITS</b>	
IC4701	TC4053BP	IC MOS LOGIC INPUT SELECT	E. S. D. AKEI
IC4702	MS222L	IC BIPOLAR LINEAR AUDIO AMP	
IC4703	UPC358C	IC BIPOLAR LINEAR OP. AMP	
		<b>TRANSISTORS</b>	
Q4701	DTC144ES		
Q4702	DTC144ES		
Q4703	ZSC945A(TP)		AKEI
Q4704	ZSC945A(TP)		AKEI
Q4705	ZSC945A(TP)		AKEI
Q4706	DTC114TS		
Q4707	DTC114TS		
Q4708	DTA144ES		
Q4709	ZSC945A(TP)		AKEI
Q4710	ZSA733(TP)		AKEI
		<b>DIODES</b>	
D4702	MA165		
D4703	MA165		
D4704	MA165		
D4705	MA165		
		<b>RESISTORS</b>	
R4701	ERDS2TJ151		150
R4702	ERDS2TJ223		22K
R4703	ERDS2TJ103		10K
R4704	ERDS2TJ472		4.7K
R4705	ERDS2TJ562		5.6K
R4706	ERDS2TJ472		4.7K

(E28)

Ref. No.	Part No.	Part Name	Remarks
R4707	ERDS2TJ153	15K	
R4708	ERDS2TJ153	15K	
R4709	ERDS2TJ153	15K	
R4710	ERDS2TJ392	3.9K	
R4711	ERDS2TJ392	3.9K	
R4712	ERDS2TJ561	560	
R4713	ERDS2TJ393	39K	
R4714	ERDS2TJ393	39K	
R4715	ERDS2TJ561	560	
R4716	ERDS2TJ821	820	
R4717	ERDS2TJ682	6.8K	
R4719	ERDS2TJ682	6.8K	
R4720	ERDS2TJ103	10K	
R4722	ERDS2TJ224	220K	
R4725	ERDS2TJ151	150	
R4726	ERDS2TJ563	56K	
R4727	ERDS2TJ154	150K	
R4728	ERDS2TJ154	150K	
R4729	ERDS2TJ101	100	
R4730	ERDS2TJ151	150	
R4731	ERDS2TJ103	10K	
R4732	ERDS2TJ101	100	
R4733	ERDS2TJ103	10K	
R4734	ERDS2TJ472	4.7K	
R4735	ERDS2TJ153	15K	
R4736	ERDS2TJ472	4.7K	
R4737	ERDS2TJ153	15K	
R4738	ERDS2TJ124	120K	
R4739	ERDS2TJ102	1K	
R4740	ERDS2TJ124	120K	
R4741	ERDS2TJ182	1.8K	
R4742	ERDS2TJ821	820	
		<b>CAPACITORS</b>	
C4703	ECA1CM470B	ELECTROLYTIC 16V 47	
C4704	ECA1HM010B	ELECTROLYTIC 50V 1	
C4705	ECA1HM010B	ELECTROLYTIC 50V 1	
C4706	ECA1HM010B	ELECTROLYTIC 50V 1	
C4707	ECA1CM100B	ELECTROLYTIC 16V 10	
C4708	ECA1CM100B	ELECTROLYTIC 16V 10	
C4709	VCYSBRE333KX	CERAMIC 25V 0.033	AKEI
C4710	VCYSBRE333KX	CERAMIC 25V 0.033	AKEI
C4711	ECA1HM2R2B	ELECTROLYTIC 50V 2.2	
C4712	ECA1HM2R2B	ELECTROLYTIC 50V 2.2	
C4713	ECA1CM220B	ELECTROLYTIC 16V 22	
C4714	ECA1CM470B	ELECTROLYTIC 16V 47	
C4715	ECA1HM010B	ELECTROLYTIC 50V 1	
C4716	ECA1HM010B	ELECTROLYTIC 50V 1	
C4717	ECA1HM010B	ELECTROLYTIC 50V 1	
C4718	ECA1CM470B	ELECTROLYTIC 16V 47	
C4719	VCYSBRE683KX	CERAMIC 25V 0.068	AKEI
C4720	VCYSBRE683KX	CERAMIC 25V 0.068	AKEI
C4722	ECA1HM2R2B	ELECTROLYTIC 50V 2.2	
C4724	ECA1CM101B	ELECTROLYTIC 16V 100	
		<b>FILTERS</b>	
FL4701	VLFS0014		
FL4702	VLFS0014		
		<b>PIN HEADERS</b>	
P4201	VJHS0290	10P	
P4202	VJHS0212	PACK PIN 2P	
P4501	VJHS0291	11P	
P4702	VJPS0255	5P	
P4703	VJPS0255	5P	
		<b>MISCELLANEOUS</b>	
E28	VMAS1912	P.C.B. SUPPORT ANGLE	

(E20)

Ref. No.	Part No.	Part Name	Remarks
		<b>POWER SUPPLY C.B.A.</b>	■
		<b>( L )</b>	
		<b>INTEGRATED CIRCUITS</b>	
IC1001	0N3131-R.KT	IC BIPOLAR LINEAR ERROR V.DET	▲
		<b>TRANSISTORS</b>	
Q1001(E20)	2SC4130LF608		▲
	OR 2SC4559LP.KT		▲
Q1002	2SD1458		
Q1003	2SC945A(P)		AKEI
Q1004	2SB641(Q)		
Q1005	2SA733(K)		AKEI
		<b>DIODES</b>	
D1001	S1WBA40		▲
	OR S1WBA60		▲
	OR S1WBA60B		▲
D1002	ERA18-04		
D1003	ERA18-04		
D1005	MA188		
D1006	RU3YXLF1		
D1007	EG01		
D1008	RK14		
D1011	MA40S1NH	ZENER 5.1V	
D1012	MA858		
D1013	MA165		
D1015	MA2180LA	ZENER 18V	▲
	OR 1N4746ARL	ZENER 18V	▲
D1016	MA165		
		<b>RESISTORS</b>	
R1003	VRESE2TJ334	1/2W 330K	
R1004	ERG25JM333H	METAL OXIDE 2W 33K	▲
	OR ERG25JS333H	METAL OXIDE 2W 33K	▲
	OR ERG25J333H	METAL OXIDE 2W 33K	▲
R1005	ERG15JM680P	METAL OXIDE 1W 68	▲
	OR ERG15JS680P	METAL OXIDE 1W 68	▲
	OR ERG15J680P	METAL OXIDE 1W 68	▲
R1006	ERDS2TJ222	2.2K	
R1007	ERDS2TJ101	100	
R1008	ERDS2TJ392	3.9K	
R1010	ERD25FJ100P	10	▲
	OR ERD25FPJ100P	10	▲
	OR VRESF4FJ100P	10	▲
R1011	ERD25FJ4R7P	4.7	▲
	OR ERD25FPJ4R7P	4.7	▲
	OR VRESF4FJ4R7P	4.7	▲
R1014	ERDS2TJ221	220	
R1015	ERDS2TJ221	220	
R1016	ERDS2TJ562	5.6K	
R1017	ERDS2TJ103	10K	
R1018	ERDS2TJ183	18K	
R1019	ERDS2TJ392	3.9K	
R1020	ERDS2TJ682	6.8K	
R1022	ERDS2TJ221	220	
		<b>CAPACITORS</b>	
C1001	ECKDRS103ZV	CERAMIC +80%-20% 125V 0.01	▲
	OR VCKSEKD103PZ	CERAMIC +80%-20% 125V 0.01	▲
	OR VCKSEMD103PZ	CERAMIC +80%-20% 125V 0.01	▲
	OR VCKSEVD103PZ	CERAMIC +80%-20% 125V 0.01	▲
	OR VCKSGKD103QZ	CERAMIC +80%-20% 125V 0.01	▲
	OR VCKSGMD103QZ	CERAMIC +80%-20% 125V 0.01	▲
	OR VCKSTKG103ZY	CERAMIC +80%-20% 125V 0.01	▲
	OR VCKSTMG103ZY	CERAMIC +80%-20% 125V 0.01	▲
	OR VCKSUKD103MY	CERAMIC +-20% 125V 0.01	▲
	OR VCKSUMD103MY	CERAMIC +-20% 125V 0.01	▲

(E14, E16, E19, E33, E34, E35, E71)

Ref. No.	Part No.	Part Name	Remarks
C1002	ECKCNS332ME	CERAMIC +-20% 125V 0.0033	▲
	OR ECKDNS332MED	CERAMIC +-20% 125V 0.0033	▲
	OR ECKDRS332MED	CERAMIC +-20% 125V 0.0033	▲
	OR VCKSEK0332MY	CERAMIC +-20% 125V 0.0033	▲
	OR VCKSEVD332MY	CERAMIC +-20% 125V 0.0033	▲
	OR VCKSHKD332MH	CERAMIC +-20% 125V 0.0033	▲
	OR VCKSTKG332MX	CERAMIC +-20% 125V 0.0033	▲
	OR VCKSTMG332MX	CERAMIC +-20% 125V 0.0033	▲
	OR VCKSUKD332MX	CERAMIC +-20% 125V 0.0033	▲
	OR VCKSUMD332MX	CERAMIC +-20% 125V 0.0033	▲
C1003	VCKSFVK102MX	CERAMIC +-20% 125V 0.001	▲
	OR VCKSFVK102MX	CERAMIC +-20% 125V 0.001	▲
	OR VCKSFVK102MX	CERAMIC +-20% 125V 0.001	▲
C1004	ECEA2DU121YE	ELECTROLYTIC 200V 120	▲
C1005	ECEA2DG4R7	ELECTROLYTIC 200V 4.7	
C1006	ECKWZH221KB5	CERAMIC 500V 220P	▲
C1007	VCYSBRC104MX	CERAMIC +-20% 16V 0.1	
C1009	ECQB1H103JF	POLYESTER +-5% 50V 0.01	
C1010	VCYSARH102KB	CERAMIC 50V 0.001	
C1011	ECEA1HGE4R7	ELECTROLYTIC 50V 4.7	
C1012	ECEA1PEE331	ELECTROLYTIC 18V 330	
C1013	ECEA1PEE331	ELECTROLYTIC 18V 330	
C1014	ECEA1HGE470	ELECTROLYTIC 50V 47	
C1016	ECEA1PEE331	ELECTROLYTIC 18V 330	
C1017	ECA0JFE102XB	ELECTROLYTIC 6.3V 1000	
C1018	VCYSBRC104MX	CERAMIC +-20% 16V 0.1	
C1021	ECEA1HG0010	ELECTROLYTIC 50V 1	
C1025	ECKDRS221MB	CERAMIC +-20% 125V 220P	▲
	OR VCKSEJD221KW	CERAMIC 125V 220P	▲
	OR VCKSELD221KW	CERAMIC 125V 220P	▲
	OR VCKSHJD221MW	CERAMIC +-20% 125V 220P	▲
	OR VCKSHLD221MW	CERAMIC +-20% 125V 220P	▲
	OR VCKSTJG221KW	CERAMIC 250V 220P	▲
	OR VCKSTLG221KW	CERAMIC 250V 220P	▲
	OR VCKSUJD221KW	CERAMIC 125V 220P	▲
	OR VCKSULD221KW	CERAMIC 125V 220P	▲
C1027	ECKDRS103ZV	CERAMIC +80%-20% 125V 0.01	▲
	OR VCKSEKD103PZ	CERAMIC +80%-20% 125V 0.01	▲
	OR VCKSEMD103PZ	CERAMIC +80%-20% 125V 0.01	▲
	OR VCKSGKD103QZ	CERAMIC +80%-20% 125V 0.01	▲
	OR VCKSGMD103QZ	CERAMIC +80%-20% 125V 0.01	▲
	OR VCKSTKG103ZY	CERAMIC +80%-20% 125V 0.01	▲
	OR VCKSTMG103ZY	CERAMIC +80%-20% 125V 0.01	▲
	OR VCKSUKD103MY	CERAMIC +-20% 125V 0.01	▲
	OR VCKSUMD103MY	CERAMIC +-20% 125V 0.01	▲
C1028	ECKDRS221MB	CERAMIC +-20% 125V 220P	▲
	OR VCKSEJD221KW	CERAMIC 125V 220P	▲
	OR VCKSELD221KW	CERAMIC 125V 220P	▲
	OR VCKSHJD221MW	CERAMIC +-20% 125V 220P	▲
	OR VCKSHLD221MW	CERAMIC +-20% 125V 220P	▲
	OR VCKSTJG221KW	CERAMIC 250V 220P	▲
	OR VCKSTLG221KW	CERAMIC 250V 220P	▲
	OR VCKSUJD221KW	CERAMIC 125V 220P	▲
	OR VCKSULD221KW	CERAMIC 125V 220P	▲
C1030	ECQB1H183JF	POLYESTER +-5% 50V 0.018	
		<b>COILS</b>	
L1001	ELF18D290A		29 ▲
	OR ELF18D290A-P		29 ▲
L1002	VLQS7A220M	+-20%	22
L1003	VLQS7A9R0M	+-20%	9
L1006	VLPS0005A		22
		<b>PIN HEADERS</b>	
P1001	VJWS8BN170BD	FLAT CABLE 8P	
P1002	VEKS5386	P801 CONNECTOR ASS'Y	AKEI
		<b>FUSE &amp; PROTECTOR</b>	
F1001	VSFS0003A16	FUSE 125V 1.6A	▲
	OR VSFS0012A16	FUSE 125V 1.6A	▲
	OR VSFS0028A16	FUSE 125V 1.6A	▲
	OR XBA1C16NU100	FUSE 125V 1.6A	▲
PR1001	ICP-F38	IC PROTECTOR 1.5A	▲
	OR ICP-F38-1	IC PROTECTOR 1.5A	▲
	OR UN10015	IC PROTECTOR 1.5A	▲
	OR VSFS0029D25	IC PROTECTOR 1.5A	▲

Ref. No.	Part No.	Part Name	Remarks
		<b>TRANSFORMER</b>	
T1001	ETS28AD1F5AC		▲
	OR VTPS0034		▲
		<b>MISCELLANEOUS</b>	
E71	VJSS3325	FUSE HOLDER	AKEI
E33	VSCS1072	HEAT SINK PLATE	
E14	VSCS2035	SHIELD CASE TOP	
E16	VSCS2507	SHIELD CASE BODY	
E34	XNG3	M3 NUT	
E35	XYN3+F10S	SCREW WITH WASHER 3X10	
		<b>OPERATION I C.B.A. (A,B,C,D,E)</b>	■
		<b>RESISTORS</b>	
R7501	ERDS2TJ472		4.7K
R7502	ERDS2TJ472		4.7K
R7503	ERDS2TJ153		15K
		<b>PIN HEADERS</b>	
P7551	VJWSCBN230BD	FLAT CABLE 12P	AKEI
		<b>SWITCHES</b>	
SW7501	EVQPAD05R	PUSH SWITCH	
SW7502	EVQPAD05R	PUSH SWITCH	
SW7503	EVQPAD05R	PUSH SWITCH	
SW7504	EVQPAD05R	PUSH SWITCH	
SW7505	EVQPAD05R	PUSH SWITCH	
		<b>OPERATION I C.B.A. (F,G)</b>	■
		<b>RESISTORS</b>	
R7501	ERDS2TJ472		4.7K
R7502	ERDS2TJ472		4.7K
R7503	ERDS2TJ153		15K
R7515	ERDS2TJ470		47
		<b>CAPACITORS</b>	
C7502	ECEA0JKA470	ELECTROLYTIC 6.3V	47
		<b>PIN HEADERS</b>	
P7551	VJWSCBN230BD	FLAT CABLE 12P	AKEI
		<b>SWITCHES</b>	
SW7501	EVQPAD05R	PUSH SWITCH	
SW7502	EVQPAD05R	PUSH SWITCH	
SW7503	EVQPAD05R	PUSH SWITCH	
SW7504	EVQPAD05R	PUSH SWITCH	
SW7505	EVQPAD05R	PUSH SWITCH	
		<b>MISCELLANEOUS</b>	
E19	GP1U272X	INFRARED RECEIVER UNIT	AKEI



(E19)

Ref. No.	Part No.	Part Name	Remarks
		<b>OPERATION I C.B.A. (H,K,L)</b>	■
		<b>RESISTORS</b>	
R7501	ERDS2TJ472	4.7K	
R7502	ERDS2TJ472	4.7K	
R7503	ERDS2TJ153	15K	
		<b>PIN HEADERS</b>	
P7551	VJWSCBN230BD	FLAT CABLE 12P	AKEI
		<b>SWITCHES</b>	
SW7501	EVQPAD05R	PUSH SWITCH	
SW7502	EVQPAD05R	PUSH SWITCH	
SW7503	EVQPAD05R	PUSH SWITCH	
SW7504	EVQPAD05R	PUSH SWITCH	
SW7505	EVQPAD05R	PUSH SWITCH	
		<b>MISCELLANEOUS</b>	
E19	SPS-420-2-B	INFRARED RECEIVER UNIT	
		<b>OPERATION I C.B.A. (I,J)</b>	■
		<b>RESISTORS</b>	
R7501	ERDS2TJ472	4.7K	
R7502	ERDS2TJ472	4.7K	
R7503	ERDS2TJ153	15K	
		<b>PIN HEADERS</b>	
P7551	VJWSCBN230BD	FLAT CABLE 12P	AKEI
		<b>SWITCHES</b>	
SW7501	EVQPAD05R	PUSH SWITCH	
SW7502	EVQPAD05R	PUSH SWITCH	
SW7503	EVQPAD05R	PUSH SWITCH	
SW7504	EVQPAD05R	PUSH SWITCH	
SW7505	EVQPAD05R	PUSH SWITCH	
		<b>MISCELLANEOUS</b>	
E19	SPS-420-2-B	INFRARED RECEIVER UNIT	
		<b>OPERATION II C.B.A. (A,B,C,D,E)</b>	■
		<b>INTEGRATED CIRCUITS</b>	
IC4501	UPC4570C (A,B)	IC BIPOLOAR LINEAR OP. AMP	
		<b>DIODES</b>	
D4501	HZ55C2TD (A,B)	ZENER 5.1V	
D4502	HZ55C2TD (A,B)	ZENER 5.1V	
D4591	HZ59C1TD (A,B)	ZENER 9.1V	
D4592	HZ59C1TD (A,B)	ZENER 9.1V	
D4593	HZ59C1TD (A,B)	ZENER 9.1V	
D4594	HZ59C1TD (A,B)	ZENER 9.1V	
D7501	LN31GCPHLMU	LED GREEN	
D7502	LN41YCPHLM	LED YELLOW	
D7503	LN31GCPHLMU	LED GREEN	

(E19, E21)

Ref. No.	Part No.	Part Name	Remarks
D7504	LN21RCPLMV	LED RED	
		<b>RESISTORS</b>	
R4501	ERDS2TJ562 (A,B)	5.6K	
R4502	ERDS2TJ104 (A,B)	100K	
R4503	ERDS2TJ104 (A,B)	100K	
R4504	ERDS2TJ750 (A,B)	75	
R4505	ERDS2TJ470 (A,B)	47	
R4591	ERDS2TJ101 (A,B)	100	
R4592	ERDS2TJ101 (A,B)	100	
R7504	ERDS2TJ472	4.7K	
R7505	ERDS2TJ472	4.7K	
R7506	ERDS2TJ153	15K	
R7510	ERDS2TJ471	470	
R7511	ERDS2TJ471	470	
R7512	ERDS2TJ471	470	
R7513	ERDS2TJ471	470	
		<b>CAPACITORS</b>	
C4501	ECEA1HKN010 (A,B)	ELECTROLYTIC 50V 1	
C4502	ECEA1CKA100 (A,B)	ELECTROLYTIC 16V 10	
		<b>PIN HEADERS</b>	
P4501	VEKS5350 (A,B)	P3004 CONNECTOR ASS'Y	AKEI
P4591	VEKS5351 (A,B)	P4153 CONNECTOR ASS'Y	AKEI
		<b>SWITCHES</b>	
SW7506	EVQPAD05R	PUSH SWITCH	
SW7507	EVQPAD05R	PUSH SWITCH	
SW7508	EVQPAD05R	PUSH SWITCH	
SW7509	EVQPAD05R	PUSH SWITCH	
SW7510	EVQPAD05R	PUSH SWITCH	
		<b>MISCELLANEOUS</b>	
JK4501	VJHS0713 (A,B)	FRONT A/V JACK	
JK4591	VJJS0357 (A,B)	EARPHONE JACK	
E19	SPS-420-2-B	INFRARED RECEIVER UNIT	
E21	VMXS0583	LED SPACER	
		<b>OPERATION II C.B.A. (F,G)</b>	■
		<b>DIODES</b>	
D7501	LN31GCPHLMU	LED GREEN	
D7502	LN41YCPHLM	LED YELLOW	
D7503	LN31GCPHLMU	LED GREEN	
D7504	LN21RCPLMV	LED RED	
		<b>RESISTORS</b>	
R7504	ERDS2TJ472	4.7K	
R7505	ERDS2TJ472	4.7K	
R7506	ERDS2TJ153	15K	
R7510	ERDS2TJ471	470	
R7511	ERDS2TJ471	470	
R7512	ERDS2TJ471	470	
R7513	ERDS2TJ471	470	

(E21, E39)

Ref. No.	Part No.	Part Name	Remarks
		<b>SWITCHES</b>	
SW7506	EVQPAD05R	PUSH SWITCH	
SW7507	EVQPAD05R	PUSH SWITCH	
SW7508	EVQPAD05R	PUSH SWITCH	
SW7509	EVQPAD05R	PUSH SWITCH	
SW7510	EVQPAD05R	PUSH SWITCH	
		<b>MISCELLANEOUS</b>	
E21	VMXS0583	LED SPACER	
		<b>OPERATION II C.B.A.</b>	■
		(H,K,L)	
		<b>DIODES</b>	
D7501	LN31GCPHLMU	LED GREEN	
D7502	LN41YCPHLM	LED YELLOW	
D7503	LN31GCPHLMU	LED GREEN	
D7504	LN21RCPHLMV	LED RED	
		<b>RESISTORS</b>	
R7504	ERDS2TJ472	4.7K	
R7505	ERDS2TJ472	4.7K	
R7506	ERDS2TJ153	15K	
R7510	ERDS2TJ471	470	
R7511	ERDS2TJ471	470	
R7512	ERDS2TJ471	470	
R7513	ERDS2TJ471	470	
		<b>SWITCHES</b>	
SW7506	EVQPAD05R	PUSH SWITCH	
SW7507	EVQPAD05R	PUSH SWITCH	
SW7508	EVQPAD05R	PUSH SWITCH	
SW7509	EVQPAD05R	PUSH SWITCH	
SW7510	EVQPAD05R	PUSH SWITCH	
		<b>MISCELLANEOUS</b>	
E39	VMXS0575	LED SPACER	
		<b>OPERATION II C.B.A.</b>	■
		(I,J)	
		<b>DIODES</b>	
D7501	LN31GCPHLMU	LED GREEN	
D7502	LN41YCPHLM	LED YELLOW	
D7503	LN31GCPHLMU	LED GREEN	
D7504	LN21RCPHLMV	LED RED	
		<b>RESISTORS</b>	
R7504	ERDS2TJ472	4.7K	
R7505	ERDS2TJ472	4.7K	
R7506	ERDS2TJ153	15K	
R7510	ERDS2TJ471	470	
R7511	ERDS2TJ471	470	
R7512	ERDS2TJ471	470	
R7513	ERDS2TJ471	470	
		<b>SWITCHES</b>	
SW7506	EVQPAD05R	PUSH SWITCH	
SW7507	EVQPAD05R	PUSH SWITCH	
SW7508	EVQPAD05R	PUSH SWITCH	
SW7509	EVQPAD05R	PUSH SWITCH	
SW7510	EVQPAD05R	PUSH SWITCH	
		<b>MISCELLANEOUS</b>	
E21	VMXS0583	LED SPACER	

(E70)

Ref. No.	Part No.	Part Name	Remarks
		<b>AUDIO/VIDEO JACK C.B.A.</b>	■
		(H)	
		<b>INTEGRATED CIRCUITS</b>	
IC4501	UPC4570G2-T1	IC BIPOLAR LINEAR OP. AMP	
		<b>DIODES</b>	
D4501	HZS5C2TD	ZENER 5.1V	
D4502	HZS5C2TD	ZENER 5.1V	
D4552	HZS9C1TD	ZENER 9.1V	
D4553	HZS9C1TD	ZENER 9.1V	
D4554	HZS9C1TD	ZENER 9.1V	
D4555	HZS9C1TD	ZENER 9.1V	
		<b>RESISTORS</b>	
R4501	ERJ66EYJ562V	MGF CHIP 1/10W 5.6K	
R4502	ERJ66EYJ104V	MGF CHIP 1/10W 100K	
R4503	ERJ66EYJ104V	MGF CHIP 1/10W 100K	
R4504	ERJ66EYJ750V	MGF CHIP 1/10W 75	
R4505	ERDS2TJ151	150	
R4551	ERDS2TJ471	470	
R4552	ERDS2TJ471	470	
		<b>CAPACITORS</b>	
C4501	ECEA1HKN010	ELECTROLYTIC 50V 1	
C4502	ECEA1CKA100	ELECTROLYTIC 16V 10	
		<b>MISCELLANEOUS</b>	
JK4501	VJHS0713	FRONT A/V JACK	
JK4551	VJJS0357	EARPHONE JACK	
E70	VEKS5508	P3004,P4153 CONNECTOR ASS'Y	AKEI
		<b>AUDIO/VIDEO JACK C.B.A.</b>	■
		(K,L)	
		<b>INTEGRATED CIRCUITS</b>	
IC4501	UPC4570C	IC BIPOLAR LINEAR OP. AMP	
		<b>DIODES</b>	
D4501	HZS5C2TD	ZENER 5.1V	
D4502	HZS5C2TD	ZENER 5.1V	
D4552	HZS9C1TD	ZENER 9.1V	
D4553	HZS9C1TD	ZENER 9.1V	
		<b>RESISTORS</b>	
R4501	ERDS2TJ562	5.6K	
R4502	ERDS2TJ104	100K	
R4503	ERDS2TJ104	100K	
R4504	ERDS2TJ750	75	
R4505	ERDS2TJ151	150	
R4551	ERDS2TJ471	470	
	(K)		
	ERDS2TJ821	820	
	(L)		
R4552	ERDS2TJ471	470	
	(K)		
	ERDS2TJ681	680	
	(L)		
R4553	ERDS2TJ471	470	
	(K)		
	ERDS2TJ821	820	
	(L)		
R4554	ERDS2TJ471	470	
	(K)		
	ERDS2TJ681	680	
	(L)		

(E69, E70, E76)

Ref. No.	Part No.	Part Name	Remarks
		<b>CAPACITORS</b>	
C4501	ECEA1HKN010	ELECTROLYTIC 50V 1	
C4502	ECEA1CKA100	ELECTROLYTIC 16V 10	
		<b>PIN HEADERS</b>	
P4501	VEKS5392	P4203 CONNECTOR ASS'Y	AKEI
	( L )		
P4551	VEKS5389	P4602 CONNECTOR ASS'Y	AKEI
	( L )		
		<b>MISCELLANEOUS</b>	
JK4501	VJH50713	FRONT A/V JACK	
JK4551	VJJS0361	EARPHONE JACK	
E70	VEKS5354	P3004,P4904 CONNECTOR ASS'Y	AKEI
	( K )		
		<b>STEREO AMP/TV AVR C.B.A. (L)</b>	■
		<b>INTEGRATED CIRCUITS</b>	
IC4601(E76)	AN7140	IC BIPOLAR LINEAR AUDIO AMP	
IC4602(E76)	AN7140	IC BIPOLAR LINEAR AUDIO AMP	
IC801(E69)	STR30130	IC BIPOLAR LINEAR +130V REGULATOR	▲
		<b>TRANSISTORS</b>	
Q4601	Z5C945A(TP)		AKEI
Q4602	Z5C945A(TP)		AKEI
		<b>RESISTORS</b>	
R4601	ERDS2TJ393	39K	
R4602	ERDS2TJ393	39K	
R4603	ERDS2TJ683	68K	
R4605	ERDS2TJ152	1.5K	
R4607	ERDS2TJ152	1.5K	
R4608	ERDS2TJ4R7	4.7	
R4609	ERDS2TJ4R7	4.7	
R4611	ERDS2TJ682	6.8K	
R4612	ERDS2TJ682	6.8K	
R4613	ERDS2TJ4R7	4.7	
R4614	ERDS2TJ4R7	4.7	
R4615	ERQ2ABJP3R9S	FUSE 2W 3.9	▲ AKEI
R802	ERDS1FJ103P	1/2W 10K	▲
	OR ERDS1FPJ103V	1/2W 10K	▲
R803	ERF10ZK8R2	W FLMPRF 10W 8.2	▲
R804	ERF20ZJ131	W FLMPRF 20W 130	▲
R805	ERDS2TJ104	100K	
R806	ERQ14AJ470P	FUSE 47	▲
R807	ERQ14AJ390P	FUSE 39	▲
R813	ERDS2TJ124	120K	
		<b>CAPACITORS</b>	
C4601	ECA1CM100B	ELECTROLYTIC 16V 10	
C4602	VCYSARC222MX	CERAMIC +-20% 16V 0.0022	
C4603	ECA1HM010B	ELECTROLYTIC 50V 1	
C4604	VCYSBRE473KX	CERAMIC 25V 0.047	AKEI
C4605	ECA1EM470B	ELECTROLYTIC 25V 47	
C4606	ECA1EM470B	ELECTROLYTIC 25V 47	
C4607	VCYSARC222MX	CERAMIC +-20% 16V 0.0022	
C4608	ECA1EM470B	ELECTROLYTIC 25V 47	
C4609	ECA1EM470B	ELECTROLYTIC 25V 47	
C4610	ECA1HM010B	ELECTROLYTIC 50V 1	
C4611	ECA1CM471B	ELECTROLYTIC 16V 470	
C4613	ECA1EM102E	ELECTROLYTIC 25V 1000	AKEI
C4614	ECA1CM471B	ELECTROLYTIC 16V 470	
C4615	ECQV1H104JZ	POLYESTER +-5% 50V 0.1	
C4616	ECQV1H104JZ	POLYESTER +-5% 50V 0.1	
C4617	VCYSBRE473KX	CERAMIC 25V 0.047	AKEI
C4618	ECA1EM470B	ELECTROLYTIC 25V 47	
C4619	ECA1EM470B	ELECTROLYTIC 25V 47	

(E15, E32, E35, E48, E64, E66, E84)

Ref. No.	Part No.	Part Name	Remarks
C806	ECEA2EU330	ELECTROLYTIC 250V 33	
		<b>COILS</b>	
L802	VLQS9A220M	+-20%	22
		<b>PIN HEADERS</b>	
P4601	VEKS5367	P4502 CONNECTOR ASS'Y	AKEI
P4602	VJPS0275		5P
P4603	VJWS6BN080BB	FLAT CABLE 6P	AKEI
P4604	VJPS0268		2P
P4605	VJPS0268		2P
		<b>FUSE &amp; PROTECTOR</b>	
F802	XBA1C15NU100	FUSE 125V 1.5A	▲
		<b>PRINTED CIRCUIT BOARD ASSEMBLY</b>	
E84	VEPS01049A1	POWER AMP C. B. A.	▲ AKEI
		<b>MISCELLANEOUS</b>	
E32	TUC76649-4	HEAT SINK PLATE	
E66	TUC77627	GROUNDING PLATE	AKEI
E15	VJSS0164	FUSE HOLDER	
E64	XTW3+10J	TAPPING SCREW 3X10	
E35	XYN3+F10S	SCREW WITH WASHER 3X10	
E48	XYN3+F6S	SCREW WITH WASHER 3X6	
		<b>POWER AMP C.B.A. (L)</b>	▲
		<b>DIODES</b>	
D1301	D2SBA20		▲
		<b>CAPACITORS</b>	
C1301	ECA1EM222E	ELECTROLYTIC 25V 2200	AKEI
		<b>PIN HEADERS</b>	
P1301	VEKS5368	P802 CONNECTOR ASS'Y	AKEI
		<b>FUSE &amp; PROTECTOR</b>	
F1301	VSF50011A04	FUSE 125V 0.4A	▲
		<b>TRANSFORMER</b>	
T1301	ETP48SFB22KN		▲
		<b>MISCELLANEOUS</b>	
E15	VJSS0164	FUSE HOLDER	
		<b>CAPSTAN MOTOR DRIVE C.B.A.</b>	■
		<b>INTEGRATED CIRCUITS</b>	
IC2501	AN3826NK	IC BIPOLAR LINEAR CAP. DRIVE	
IC2502	PUA3228	IC BIPOLAR LINEAR POWER DRIVE	
		<b>RESISTORS</b>	
R2501	ERDS2TJ1R5		1.5
R2502	ERDS2TJ1R2		1.2
R2503	ERD10LLJ270	CHIP 1/8W	27
R2504	ERD10LLJ330	CHIP 1/8W	33
R2505	ERD10LLJ272	CHIP 1/8W	2.7K

Ref. No.	Part No.	Part Name	Remarks
		<b>CAPACITORS</b>	
C2501	ECEA1CU100	ELECTROLYTIC 16V 10	
C2502	VCESR1C100B	ELECTROLYTIC 16V 10	AKEI
C2503	VCESR1C100B	ELECTROLYTIC 16V 10	AKEI
C2504	ECUV1E104KBN	C CHIP 25V 0.1	
C2505	ECEA1HU010	ELECTROLYTIC 50V 1	
C2506	ECUV1C563KBN	C CHIP 16V 0.056	
C2507	ECUV1E104ZFN	C CHIP +80%-20% 25V 0.1	
C2508	ECUV1E104ZFN	C CHIP +80%-20% 25V 0.1	
C2509	VCUSBC103NY	C CHIP +-30% 16V 0.01	
C2510	VCUSBC103NY	C CHIP +-30% 16V 0.01	
C2511	VCUSBC103NY	C CHIP +-30% 16V 0.01	
C2512	VCUSBC152NX	C CHIP +-30% 16V 0.0015	
		<b>PIN HEADERS</b>	
P2501	VJSS0766		22P
P2505	VJWS6BN095LE	FLAT CABLE 6P	
		<b>HEAD AMP C.B.A. ( A,B,C,D,E,H,I,J,L )</b>	■
		<b>INTEGRATED CIRCUITS</b>	
IC2601	AN3813K	IC BIPOLAR LINEAR CYL. DRIVE	
IC3501	AN3362K	IC BIPOLAR LINEAR HEAD AMP	
		<b>RESISTORS</b>	
R2601	ERJ6GEYJ471V	MGF CHIP 1/10W 470	
R2602	ERJ6GEYJ471V	MGF CHIP 1/10W 470	
R2603	ERJ6GEYJ471V	MGF CHIP 1/10W 470	
R2604	ERDS2TJ1R0		1
R2605	ERDS2TJ1R2		1.2
R2606	ERJ6GEYJ561V	MGF CHIP 1/10W 560	
R3506	ERJ6GEYJ331V	MGF CHIP 1/10W 330	
		<b>CAPACITORS</b>	
C2601	ECUV1E104ZFN	C CHIP +80%-20% 25V 0.1	
C2602	ECUV1E104ZFN	C CHIP +80%-20% 25V 0.1	
C2603	ECUV1E104ZFN	C CHIP +80%-20% 25V 0.1	
C2604	ECUV1E104KBN	C CHIP 25V 0.1	
C2605	ECUV1E104KBN	C CHIP 25V 0.1	
C2606	ECUV1E104KBN	C CHIP 25V 0.1	
C2607	ECUV1E104KBN	C CHIP 25V 0.1	
C2608	ECUV1E104ZFN	C CHIP +80%-20% 25V 0.1	
C2609	ECUV1E104ZFN	C CHIP +80%-20% 25V 0.1	
C2610	ECUV1H103ZFN	C CHIP +80%-20% 50V 0.01	
C2611	ECUV1E223KBN	C CHIP 25V 0.022	
C2612	ECUV1E104ZFN	C CHIP +80%-20% 25V 0.1	
C3504	ECUV1H103ZFN	C CHIP +80%-20% 50V 0.01	
C3505	ECEA1CKA470	ELECTROLYTIC 16V 47	
C3506	ECUV1E104ZFN	C CHIP +80%-20% 25V 0.1	
C3507	ECUV1H103KBN	C CHIP 50V 0.01	
C3508	ECUV1E104ZFN	C CHIP +80%-20% 25V 0.1	
C3511	ECUV1E104ZFN	C CHIP +80%-20% 25V 0.1	
C3512	ECUV1E104ZFN	C CHIP +80%-20% 25V 0.1	
C3513	ECUV1E104ZFN	C CHIP +80%-20% 25V 0.1	
C3519	ECUV1E104ZFN	C CHIP +80%-20% 25V 0.1	
C3520	ECUV1E104ZFN	C CHIP +80%-20% 25V 0.1	
C3524	ECUV1E104ZFN	C CHIP +80%-20% 25V 0.1	
C3525	ECUV1E104ZFN	C CHIP +80%-20% 25V 0.1	
C3528	ECUV1E104ZFN	C CHIP +80%-20% 25V 0.1	
C3529	ECUV1H103ZFN	C CHIP +80%-20% 50V 0.01	
C3532	ECUV1E104ZFN	C CHIP +80%-20% 25V 0.1	
C3533	ECUV1H103ZFN	C CHIP +80%-20% 50V 0.01	
		<b>COILS</b>	
L3501	ELESN101KA		100
		<b>PIN HEADERS</b>	
P3501	VJSS0766		22P
P3504	VJWS2JN120AN	FLAT CABLE 2P	
		<b>TV STEREO AMP C.B.A. ( K )</b>	■
		<b>INTEGRATED CIRCUITS</b>	
IC4901	VCRS0206	HIC MTS/SAP AUDIO PROCESS	
IC4902	UPD40538C	IC MOS LOGIC INPUT SELECT	E. S. D. AKEI
IC4903	AN5265	IC BIPOLAR LINEAR AUDIO AMP	
IC4904	AN5265	IC BIPOLAR LINEAR AUDIO AMP	
		<b>TRANSISTORS</b>	
Q4901	DTC144ES		
Q4902	DTC144ES		
Q4903	DTC144ES		
Q4905	ZSC945A(TP)		AKEI
Q4906	ZSC945A(TP)		AKEI
		<b>DIODES</b>	
D4903	MA4056-M	ZENER	5.6V

Ref. No.	Part No.	Part Name	Remarks
		<b>RESISTORS</b>	
R2601	ERJ6GEYJ471V	MGF CHIP 1/10W 470	
R2602	ERJ6GEYJ471V	MGF CHIP 1/10W 470	
R2603	ERJ6GEYJ471V	MGF CHIP 1/10W 470	
R2604	ERDS2TJ1R0		1
R2605	ERDS2TJ1R2		1.2
R2606	ERJ6GEYJ561V	MGF CHIP 1/10W 560	
R3501	ERJ6GEYJ473V	MGF CHIP 1/10W 47K	
R3502	ERJ6GEYJ560V	MGF CHIP 1/10W 56	
R3503	ERJ6GEYJ560V	MGF CHIP 1/10W 56	
R3504	ERJ6GEYJ560V	MGF CHIP 1/10W 56	
R3505	ERJ6GEYJ560V	MGF CHIP 1/10W 56	
R3506	ERJ6GEYJ391V	MGF CHIP 1/10W 390	
R3507	ERJ6GEYJ391V	MGF CHIP 1/10W 390	
		<b>CAPACITORS</b>	
C2601	ECUV1E104ZFN	C CHIP +80%-20% 25V 0.1	
C2602	ECUV1E104ZFN	C CHIP +80%-20% 25V 0.1	
C2603	ECUV1E104ZFN	C CHIP +80%-20% 25V 0.1	
C2604	ECUV1E104KBN	C CHIP 25V 0.1	
C2605	ECUV1E104KBN	C CHIP 25V 0.1	
C2606	ECUV1E104KBN	C CHIP 25V 0.1	
C2607	ECUV1E104KBN	C CHIP 25V 0.1	
C2608	ECUV1E104ZFN	C CHIP +80%-20% 25V 0.1	
C2609	ECUV1E104ZFN	C CHIP +80%-20% 25V 0.1	
C2610	ECUV1H103ZFN	C CHIP +80%-20% 50V 0.01	
C2611	ECUV1E223KBN	C CHIP 25V 0.022	
C2612	ECUV1E104ZFN	C CHIP +80%-20% 25V 0.1	
C3504	ECUV1H103ZFN	C CHIP +80%-20% 50V 0.01	
C3505	ECEA1CKA470	ELECTROLYTIC 16V 47	
C3506	ECUV1E104ZFN	C CHIP +80%-20% 25V 0.1	
C3507	ECUV1H103KBN	C CHIP 50V 0.01	
C3508	ECUV1E104ZFN	C CHIP +80%-20% 25V 0.1	
C3511	ECUV1E104ZFN	C CHIP +80%-20% 25V 0.1	
C3512	ECUV1E104ZFN	C CHIP +80%-20% 25V 0.1	
C3513	ECUV1E104ZFN	C CHIP +80%-20% 25V 0.1	
C3519	ECUV1E104ZFN	C CHIP +80%-20% 25V 0.1	
C3520	ECUV1E104ZFN	C CHIP +80%-20% 25V 0.1	
C3524	ECUV1E104ZFN	C CHIP +80%-20% 25V 0.1	
C3525	ECUV1E104ZFN	C CHIP +80%-20% 25V 0.1	
C3528	ECUV1E104ZFN	C CHIP +80%-20% 25V 0.1	
C3529	ECUV1H103ZFN	C CHIP +80%-20% 50V 0.01	
C3532	ECUV1E104ZFN	C CHIP +80%-20% 25V 0.1	
C3533	ECUV1H103ZFN	C CHIP +80%-20% 50V 0.01	
		<b>COILS</b>	
L3501	ELESN101KA		100
		<b>PIN HEADERS</b>	
P3501	VJSS0766		22P
P3504	VJWS2JN120AN	FLAT CABLE 2P	
		<b>TV STEREO AMP C.B.A. ( K )</b>	■
		<b>INTEGRATED CIRCUITS</b>	
IC4901	VCRS0206	HIC MTS/SAP AUDIO PROCESS	
IC4902	UPD40538C	IC MOS LOGIC INPUT SELECT	E. S. D. AKEI
IC4903	AN5265	IC BIPOLAR LINEAR AUDIO AMP	
IC4904	AN5265	IC BIPOLAR LINEAR AUDIO AMP	
		<b>TRANSISTORS</b>	
Q4901	DTC144ES		
Q4902	DTC144ES		
Q4903	DTC144ES		
Q4905	ZSC945A(TP)		AKEI
Q4906	ZSC945A(TP)		AKEI
		<b>DIODES</b>	
D4903	MA4056-M	ZENER	5.6V

(E54, E69, E75)

Ref. No.	Part No.	Part Name	Remarks
		<b>RESISTORS</b>	
R4901	EVND8AA03B14	VARIABLE 10K	
R4903	ERDS2TJ472	4.7K	
R4906	ERDS2TJ221	220	
R4907	ERDS2TJ561	560	
R4908	ERDS2TJ182	1.8K	
R4909	ERDS2TJ101	100	
R4911	ERDS2TJ823	82K	
R4912	ERDS2TJ152	1.5K	
R4914	ERDS2TJ103	10K	
R4915	ERDS2TJ103	10K	
R4916	ERDS2TJ391	390	
R4917	ERDS2TJ100	10	
R4919	ERDS2TJ561	560	
R4920	ERQ1ABJP8R25	FUSE 1W 8.2	▲
R4921	ERDS2TJ823	82K	
R4922	ERDS2TJ103	10K	
R4923	ERDS2TJ391	390	
R4926	ERDS2TJ103	10K	
R4927	ERDS2TJ100	10	
R4928	ERDS2TJ103	10K	
R4929	ERDS2TJ103	10K	
R4930	ERDS2TJ472	4.7K	
R4931	ERDS2TJ562	5.6K	
R4932	ERDS2TJ153	15K	
R4933	ERDS2TJ221	220	
R4934	ERDS2TJ153	15K	
R4935	ERDS2TJ153	15K	
R4936	ERDS2TJ103	10K	
R4937	ERDS2TJ103	10K	
		<b>CAPACITORS</b>	
C4901	ECA1CM470B	ELECTROLYTIC 16V 47	
C4903	ECA1CM470B	ELECTROLYTIC 16V 47	
C4905	ECA1HM010B	ELECTROLYTIC 50V 1	
C4912	ECA1CM470B	ELECTROLYTIC 16V 47	
C4913	ECA1CM100B	ELECTROLYTIC 16V 10	
C4914	ECA1HM4R7B	ELECTROLYTIC 50V 4.7	AKEI
C4915	ECA1HM4R7B	ELECTROLYTIC 50V 4.7	AKEI
C4916	ECEA1EU222	ELECTROLYTIC 25V 2200	
C4917	VCYSBRE473KX	CERAMIC 25V 0.047	AKEI
C4918	ECA1CM100B	ELECTROLYTIC 16V 10	
C4919	ECA1CM471B	ELECTROLYTIC 16V 470	
C4920	VCYSBRE473KX	CERAMIC 25V 0.047	AKEI
C4922	ECA1CM100B	ELECTROLYTIC 16V 10	
C4923	ECA1HM4R7B	ELECTROLYTIC 50V 4.7	AKEI
C4924	VCYSBRE473KX	CERAMIC 25V 0.047	AKEI
C4925	ECA1CM100B	ELECTROLYTIC 16V 10	
C4927	ECA1CM471B	ELECTROLYTIC 16V 470	
C4928	VCYSBRE473KX	CERAMIC 25V 0.047	AKEI
C4929	ECA1HM010B	ELECTROLYTIC 50V 1	
C4930	ECA1HM010B	ELECTROLYTIC 50V 1	
		<b>PIN HEADERS</b>	
P4901	VJWSEBN155BF	FLAT CABLE 14P	AKEI
P4902	VJPS0257	2P	
P4903	VJPS0268	2P	
P4904	VJPS0275	5P	
P4905	VJPS0268	2P	
		<b>MISCELLANEOUS</b>	
E75	VMXS0876	P.C.B. SPACER A	
		<b>TV MAIN C.B.A.</b>	■
		<b>(A,B,C,D,E,F,G,H,I,J,K)</b>	
		<b>INTEGRATED CIRCUITS</b>	
IC201	UPC4570C	IC BIPOLAR LINEAR OP. AMP ( C,D,E,F,G,I,J )	
IC451(E54)	LA7837	IC BIPOLAR LINEAR VERTICAL OUT	
IC801(E69)	STR30130	IC BIPOLAR LINEAR +130V REGULATOR	▲

(E53)

Ref. No.	Part No.	Part Name	Remarks
		<b>TRANSISTORS</b>	
Q501	25C1473(QNC)	( A,B,C,D,E,F,G )	
	25C2653H(CL)	( H,I,J,K )	
Q502	25C945A(TQ)		
Q521	25C945A(TQ)		
Q522	25A733(TQ)		AKEI
Q523	25A733(TQ)		AKEI
Q551	25D1555LBMTV		▲
	OR 25D2499LBMA		▲
	( A,B,C,D,E,F,G )		
(E53)	25D1555LBMTV		▲
	OR 25D2499LBMA		▲
	( H,I,J,K )		AKEI
Q801	25D636(Q)		
		<b>DIODES</b>	
D201	HZ55C2TD	ZENER 5.1V	
	( C,D,E,F,G,I,J )		
D202	HZ55C2TD	ZENER 5.1V	
	( C,D,E,F,G,I,J )		
D450	ERB12-01V		
D521	MA165		
D522	MA4200-H	ZENER 20V	
D523	MA165		
D531	MA4082N-M	ZENER 8.2V	AKEI
D542	MA165		
	( C,D,F,G )		
D551	ERB43-04V		
D552	ERB43-04V		
D553	ERB43-04V		
D554	ERB43-04V		
D555	MA167		
D556	MA167		
	( A,B,C,D,E,F,G )		
D557	ERB44-04V		
	( H,I,J,K )		
D558	RH2FV		
	( H,I,J,K )		
D7002	HZ30-3TD	ZENER 30V	
D801	EM02BMV		▲
	OR ERC13-08V		▲
D802	EM02BMV		▲
	OR ERC13-08V		▲
D803	EM02BMV		▲
	OR ERC13-08V		▲
D804	EM02BMV		▲
	OR ERC13-08V		▲
D805	MA165		
D806	MA167		
D851	ERPZ5B0M050F	THERMISTOR	▲
	OR VRPSC25JM050	THERMISTOR	▲
	OR VRP5F25JM050	THERMISTOR	▲
	OR VRPSJ25JM050	THERMISTOR	▲
	( A,B,C,D,E,F,G )		AKEI
	ERP5B0M050K	THERMISTOR	▲
	OR TRPF5B0M050K	THERMISTOR	▲
	OR VRPSKF5JM050	THERMISTOR	▲
	( H,I,J,K )		AKEI
		<b>RESISTORS</b>	
R201	ERDS2TJ750	75	
	( C,D,E,F,G,I,J )		
R202	ERDS2TJ104	100K	
	( C,D,E,F,G,I,J )		
R203	ERDS2TJ104	100K	
	( C,D,E,F,G,I,J )		
R204	ERDS2TJ562	5.6K	
	( C,D,E,F,G,I,J )		
R206	ERDS2TJ151	150	
	( C,D,E,F,G,I,J,K )		
R301	ERDS2TJ104	100K	
	( A,B,C,D,E,F,G )		
	ERDS2TJ823	82K	
	( H,I,J,K )		



Ref. No.	Part No.	Part Name	Remarks
C505	ECKW2H821KB5 ( A,B,C,D,E,F,G )	CERAMIC 500V 820P	
	ECKW2H681KB5 ( H,I,J,K )	CERAMIC 500V 680P	
C520	ECKW1H103ZF5	CERAMIC +80%-20% 50V 0.01	
C521	ECA1HM100B	ELECTROLYTIC 50V 10	
C523	ECA1HM010B	ELECTROLYTIC 50V 1	
C524	ECKW1H103ZF5	CERAMIC +80%-20% 50V 0.01	
C531	ECQ81H562JF	POLYESTER +-5% 50V 0.0056	
C542	VCYSARH391KB ( C,D,F,G )	CERAMIC 50V 390P	
C551	ECEA1EK470	ELECTROLYTIC 25V 47	
C552	ECA1VM101B	ELECTROLYTIC 35V 100	
C553	ECEA2DU100E ( A,B,C,D,E,F,G )	ELECTROLYTIC 200V 10	
	ECEA2EU100 ( H,I,J,K )	ELECTROLYTIC 250V 10	
C554	ECEA2CU2R2 ( A,B,C,D,E,F,G )	ELECTROLYTIC 160V 2.2	
	ECEA2CGE2R2B ( H,I,J,K )	ELECTROLYTIC 160V 2.2	
C555	ECA1HM100B	ELECTROLYTIC 50V 10	
C556	ECWH12H562J5 OR TCWH12H562J5 ( A,B,E )	POLYESTER +-5% 1200V 0.0056 POLYESTER +-5% 1200V 0.0056	AKEI
	ECWH12H682J5 OR TACS1682P500 OR TCWH12H682J5 OR VCFSF1682JB ( C,D,F,G,H,I,J,K )	POLYESTER +-5% 1200V 0.0068 POLYESTER +-5% 1200V 0.0068 POLYESTER +-5% 1200V 0.0068 POLYESTER +-5% 1200V 0.0068	
C557	ECQF2H364JZA ( A,B,E )	POLYESTER +-5% 500V 0.36	
	ECQF2H334JZ ( C,D,F,G,H,I,J,K )	POLYESTER +-5% 500V 0.33	
C559	ECKC3D471KBN OR ECKC3D471KBP ( A,B,E )	CERAMIC 2KV 470P CERAMIC 2KV 470P	
	ECKC3D152KBN OR ECKC3D152KBP OR ECKW3D152KBN OR ECKW3D152KBP ( H,I,J,K )	CERAMIC 2KV 0.0015 CERAMIC 2KV 0.0015 CERAMIC 2KV 0.0015 CERAMIC 2KV 0.0015	AKEI
C560	ECWH12H332J5 ( H,I,J,K )	POLYESTER +-5% 1200V 0.0033	
C561	ECQM2823KZB OR ECQM2823KZW ( H,I,J,K )	POLYESTER 200V 0.082 POLYESTER 200V 0.082	
C562	ECKW2H221KB5	CERAMIC 500V 220P	
C7001	ECEA0JU101	ELECTROLYTIC 6.3V 100	
C7004	ECKW1H682KB5 ( A,B,C,D,E,F,G,H,I,J )	CERAMIC 500V 0.0068	
C7007	ECQ81H104P9	POLYESTER +100%-0% 50V 0.1	
C7008	ECEA1CU221	ELECTROLYTIC 16V 220	
C7010	ECKW1H103ZF5	CERAMIC +80%-20% 50V 0.01	
C7013	ECEA1CU100 ( K )	ELECTROLYTIC 16V 10	
C7018	ECKW1H103ZF5	CERAMIC +80%-20% 50V 0.01	
C7019	ECKW1H103ZF5	CERAMIC +80%-20% 50V 0.01	
C7030	VCYSARH330J	CERAMIC +-5% 50V 33P	
C7031	VCYSARH330J	CERAMIC +-5% 50V 33P	
C7032	VCYSARH330J	CERAMIC +-5% 50V 33P	
C801	ECKM2H472PE7 OR ECKM2H472PU7 OR ECKW2H472PU7	CERAMIC +100%-0% 500V 0.0047 CERAMIC +100%-0% 500V 0.0047 CERAMIC +100%-0% 500V 0.0047	
C802	ECKM2H472PE7 OR ECKM2H472PU7 OR ECKW2H472PU7	CERAMIC +100%-0% 500V 0.0047 CERAMIC +100%-0% 500V 0.0047 CERAMIC +100%-0% 500V 0.0047	
C803	ECKM2H472PE7 OR ECKM2H472PU7 OR ECKW2H472PU7	CERAMIC +100%-0% 500V 0.0047 CERAMIC +100%-0% 500V 0.0047 CERAMIC +100%-0% 500V 0.0047	
C804	ECKM2H472PE7 OR ECKM2H472PU7 OR ECKW2H472PU7	CERAMIC +100%-0% 500V 0.0047 CERAMIC +100%-0% 500V 0.0047 CERAMIC +100%-0% 500V 0.0047	

Ref. No.	Part No.	Part Name	Remarks
C805	ECES2DU221EG OR ECET2DR221SW ( A,B,C,D,E,F,G )	ELECTROLYTIC 200V 220 ELECTROLYTIC 200V 220	
	ECES2PU471HG OR ECET2PR471SW ( H,I,J,K )	ELECTROLYTIC 180V 470 ELECTROLYTIC 180V 470	
C806	ECEA2EU100 ( A,B,C,D,E,F,G )	ELECTROLYTIC 250V 10	
	ECEA2EU220 ( H,I,J,K )	ELECTROLYTIC 250V 22	
C807	ECKDRS103ZV OR VCKSEKD103PZ OR VCKSEMD103PZ OR VCKSGKD103QZ OR VCKSGMD103QZ OR VCKSTKG103ZY OR VCKSTMG103ZY OR VCKSUKD103MY OR VCKSUMD103MY	CERAMIC +80%-20% 125V 0.01 CERAMIC +80%-20% 125V 0.01 CERAMIC +80%-20% 125V 0.01 CERAMIC +80%-20% 125V 0.01 CERAMIC +80%-20% 125V 0.01 CERAMIC +80%-20% 125V 0.01 CERAMIC +-20% 125V 0.01 CERAMIC +-20% 125V 0.01	
C808	ECEA180V33WE	ELECTROLYTIC 180V 33	
C810	VCKSFKK332MY OR VCKSFMK332MY OR VCKSFVK332MY	CERAMIC +-20% 125V 0.0033 CERAMIC +-20% 125V 0.0033 CERAMIC +-20% 125V 0.0033	AKEI
C811	ECKDRS103ZV OR VCKSEKD103PZ OR VCKSEMD103PZ OR VCKSGKD103QZ OR VCKSGMD103QZ OR VCKSTKG103ZY OR VCKSTMG103ZY OR VCKSUKD103MY OR VCKSUMD103MY ( A,B,C,D,E,F,G )	CERAMIC +80%-20% 125V 0.01 CERAMIC +80%-20% 125V 0.01 CERAMIC +80%-20% 125V 0.01 CERAMIC +80%-20% 125V 0.01 CERAMIC +80%-20% 125V 0.01 CERAMIC +80%-20% 125V 0.01 CERAMIC +80%-20% 125V 0.01 CERAMIC +-20% 125V 0.01 CERAMIC +-20% 125V 0.01	
	ECKCNS223ZV OR ECKDNS223ZV ( H,I,J,K )	CERAMIC +80%-20% 125V 0.022 CERAMIC +80%-20% 125V 0.022	
		<b>COILS</b>	
L551	ELH5L423 OR LLH2601T OR VLQ50160 ( H,I,J,K )		AKEI
L552	TSC925		
L7001	VLQSG06R221K		220
L7002	ELESN101KA		100
L801	ELF18D424F OR VLQ50154 OR VLQ50159 ( A,B,C,D,E,F,G )		420M 420M 420M
	ELF18D650C OR VLQ50155 OR VLQ50158 ( H,I,J,K )		65 65 65
L802	VLQ57A220M ( H,I,J,K )		+20% 22
		<b>PIN HEADERS</b>	
P201	VJSS0870	CONNECTOR RECEPTACLE 11P	AKEI
P202	VJSS0869	CONNECTOR RECEPTACLE 7P	AKEI
P203	VJSS0872	CONNECTOR RECEPTACLE 19P	AKEI
P204	VEKS5500 ( K )	P4902 CONNECTOR ASS'Y	AKEI
P801	VJPS0748		3P AKEI
		<b>FUSE &amp; PROTECTOR</b>	
F801	VSFS0003A40 OR XBALC40NU100	FUSE 125V 4A FUSE 125V 4A	AKEI
		<b>RELAY</b>	
RL801	TSEH0005 OR TSEH8007 OR TSE1860-1 OR TSE1864		AKEI AKEI AKEI AKEI

(E8, E11, E12, E35, E47, E48, E50, E53, E54, E57, E61, E62, E64, E66, E71, E74)

Ref. No.	Part No.	Part Name	Remarks
		<b>TRANSFORMER</b>	
T501	TLH15419 ( A, B, C, D, E, F, G ) ETH19Y70AY ( H, I, J, K )		
T502	ETE19Z30AY		▲
T551(E57)	TLF14767F2 ( A, B, C, D, E, F, G )	FLYBACK TRANSFORMER	▲ AKEI
(E57)	TLF15575F ( H, I, J, K )	FLYBACK TRANSFORMER	▲ AKEI
		<b>PRINTED CIRCUIT BOARD ASSEMBLY</b>	
E8	TNP73154EE ( A, B, C, D, E, F, G )	CRT C.B.A.	▲ AKEI
E8	TNP73154FF ( H, I, J, K )	CRT C.B.A.	▲ AKEI
		<b>MISCELLANEOUS</b>	
JK201(E11)	VJHS0353 ( C, D, E, F, G, I, J )	A/V JACK	
E71	VJSS3325	FUSE HOLDER	AKEI
E50	XTV3+10G	TAPPING SCREW 3X10	
E64	XTW3+10J	TAPPING SCREW 3X10	
E35	XYN3+F10S	SCREW WITH WASHER 3X10	
E48	XYN3+F6S	SCREW WITH WASHER 3X6	
E62	TMM76403-1	CLAMPER	
E74	TSX7151-N ( A, C, D, F, H, I, K )	AC CORD	▲ AKEI
E74	TSX7152-N ( B, E, G, J )	AC CORD	▲ AKEI
E47	TUC76677-1 ( A, B, C, D, E, F, G )	HEAT SINK PLATE	
E47	TUC77626 ( H, I, J, K )	HEAT SINK PLATE	AKEI
E66	TUC77616 ( A, B, C, D, E, F, G )	GROUNDING PLATE	AKEI
E66	TUC77603-1 ( H, I, J, K )	GROUNDING PLATE	AKEI
E61	TUC77625 ( H, I, J, K )	HEAT SINK PLATE	AKEI
E12	VEQS0583 ( A, B, C, D, E, F, G, H, I, J )	UHF/VHF TUNER/TV DEMODULATOR UNIT NR	
E12	VEQS0584 ( K )	UHF/VHF TUNER/TV DEMODULATOR UNIT NR	
		<b>TV MAIN C.B.A. ( L )</b>	■
		<b>INTEGRATED CIRCUITS</b>	
IC451(E54)	LA7837	IC BIPOLAR LINEAR VERTICAL OUT	
		<b>TRANSISTORS</b>	
Q501	2SC2653H(CL)		
Q502	2SC945A(TQ)		
Q521	2SC945A(TQ)		
Q522	2SA733(TQ)		AKEI
Q523	2SA733(TQ)		AKEI
Q551(E53)	2SD15551BMTV OR 2SD2499LBMA		▲ AKEI
Q801	2SD636(Q)		
		<b>DIODES</b>	
D450	ERB12-01V		
D521	MA165		
D522	MA4200-H	ZENER 20V	
D523	MA165		
D531	MA4082N-M	ZENER 8.2V	AKEI
D551	ERB43-04V		
D552	ERB43-04V		

Ref. No.	Part No.	Part Name	Remarks
D554	ERB43-04V		
D555	MA167		
D558	ERD07-15L26		
D7002	HZ30-3TD	ZENER 30V	
D801	D45880		▲
D805	MA165		
D806	MA167		
D851	TRPW5B0M050D	THERMISTOR	▲
		<b>RESISTORS</b>	
R301	ERDS2TJ683		68K
R302	ERDS2TJ683		68K
R303	ERDS2TJ822		8.2K
R304	ERDS2TJ123		12K
R450	ERD25FJ101P OR ERD25FPJ101V		100 ▲
R451	ERDS2TJ273		27K
R452	EVND8AA03B54	VARIABLE	50K
R458	ERD25FJ5R6P OR ERD25FPJ5R6V		5.6 ▲
R459	ERDS2TJ123		12K
R460	ERDS2TJ822		8.2K
R461	ERDS2TJ334		330K
R464	ERD25FJ1R2P OR ERD25FPJ1R2V		1.2 ▲
R465	ERDS2TJ153		15K
R466	ERDS2TJ683		68K
R467	ERDS2TJ681		680
R468	ERDS2TJ103		10K
R472	ERDS2TJ272		2.7K
R474	ERDS2TJ103		10K
R475	ERG2SJ5561H OR ERG2SJ561H	METAL OXIDE	2W 560 ▲
R501	ERDS2TJ821		820
R502	ERDS2TJ332		3.3K
R503	ERDS2TJ272		2.7K
R504	ERDS2TJ222		2.2K
R505	ERG3ANJ242H	METAL OXIDE	3W 2.4K ▲
R506	ERG2ANJP362H	METAL OXIDE	2W 3.6K ▲
R507	ERG2SJ5272H OR ERG2SJ272H	METAL OXIDE	2W 2.7K ▲
R508	ERDS2TJ100		10
R509	ERDS2TJ101		100
R515	ER0S2TKF2552	METAL FILM +-1%	25.5K ▲
R516	ERDS2TJ473		47K
R521	ERDS2TJ101		100
R522	ERDS2TJ103		10K
R523	ERDS2TJ333		33K
R524	ERDS2TJ223		22K
R525	ERDS2TJ822		8.2K
R526	ERDS2TJ155		1.5M
R527	ERDS2TJ272		2.7K
R531	ERDS2TJ102		1K
R532	EVND8AA03B23	VARIABLE	2K
R533	ERDS2TJ101		100
R541	ERDS2TJ822		8.2K
R543	ERDS2TJ103		10K
R545	ERDS2TJ563		56K
R546	ERDS2TJ562		5.6K
R552	ERG2ANJP561H OR ERG2ANJU561V OR ERG2ANJ561H	METAL OXIDE	2W 560 ▲
R553	ERQ2CJP102S	FUSE	2W 1K ▲
R554	ERDS2TJ103		10K
R555	ERDS2TJ102		1K
R556	ERQ3CJ3R3H	FUSE	3W 3.3 ▲
R7002	ERDS2TJ271		270
R7003	ERDS2TJ182		1.8K
R7004	ERDS2TJ182		1.8K
R7030	ERDS2TJ182		1.8K
R7031	ERDS2TJ182		1.8K
R7032	ERDS2TJ182		1.8K
R801	ERFSZKR82	W FLMPRF +-10%	5W 0.82 ▲
R808	ERFSZKR2R2	W FLMPRF +-10%	5W 2.2 ▲
R810	ERDS2TJ222		2.2K
R811	ERDS2TJ103		10K



(E8, E12, E31, E35, E47, E48, E50, E57, E59, E61, E62, E67, E72, E74)

Ref. No.	Part No.	Part Name	Remarks
R812	ERC12ZGK825C	SOLID +-10% 1/2W 8.2M	▲
	OR ERC12ZGK825V	SOLID +-10% 1/2W 8.2M	▲
	OR VRESC2TK825	SOLID +-10% 1/2W 8.2M	▲
	OR VRESC2TK825C	SOLID +-10% 1/2W 8.2M	▲
	OR VRESC2TK825T	SOLID +-10% 1/2W 8.2M	▲
R851	ERFSZJ121	W FLMPRF 5W 120	▲
		<b>CAPACITORS</b>	
C450	ECEA50Z1R5	ELECTROLYTIC 50V 1.5	
C451	ECEA1HGE2R2	ELECTROLYTIC 50V 2.2	
C452	ECEA1CU222	ELECTROLYTIC 16V 2200	
C453	ECA1EM101B	ELECTROLYTIC 25V 100	
C457	ECEA1CU471	ELECTROLYTIC 16V 470	
C458	ECQB1H103JF	POLYESTER +-5% 50V 0.01	
C459	ECQB1H104KF	POLYESTER 50V 0.1	
C460	ECA1VM101B	ELECTROLYTIC 35V 100	
C505	ECKW2H122KB5	CERAMIC 500V 0.0012	
C520	ECKW1H103ZF5	CERAMIC +80%-20% 50V 0.01	
C521	ECA1HM100B	ELECTROLYTIC 50V 10	
C523	ECA1HM010B	ELECTROLYTIC 50V 1	
C524	ECKW1H103ZF5	CERAMIC +80%-20% 50V 0.01	
C534	ECQB1H562JF	POLYESTER +-5% 50V 0.0056	
C552	ECA1VM101B	ELECTROLYTIC 35V 100	
C553	ECEA2EU100	ELECTROLYTIC 250V 10	
C554	ECEA2CU4R7B	ELECTROLYTIC 160V 4.7	AKEI
C555	ECA1HM100B	ELECTROLYTIC 50V 10	
C556	ECWH12H562J5	POLYESTER +-5% 1200V 0.0056	▲
	OR TCWH12H562J5	POLYESTER +-5% 1200V 0.0056	▲
	OR ECQF2H564JZA	POLYESTER +-5% 500V 0.56	AKEI
C559	ECKC3D102KBN	CERAMIC 2KV 0.001	▲
C560	ECWH12H103JR	CERAMIC +-5% 1200V 0.01	AKEI
C562	ECKW2H221KB5	CERAMIC 500V 220P	
C573	ECKW2H122KB5	CERAMIC 500V 0.0012	
C7001	ECEA0JU101	ELECTROLYTIC 6.3V 100	
C7004	VCYSARH221KB	CERAMIC 50V 220P	
C7007	ECQB1H104P9	POLYESTER +100%-0% 50V 0.1	
C7008	ECEA1CU221	ELECTROLYTIC 16V 220	
C7010	ECKW1H103ZF5	CERAMIC +80%-20% 50V 0.01	
C7013	ECEA1CU100	ELECTROLYTIC 16V 10	
C7018	ECKW1H103ZF5	CERAMIC +80%-20% 50V 0.01	
C7019	ECKW1H103ZF5	CERAMIC +80%-20% 50V 0.01	
C7030	VCYSARH330J	CERAMIC +-5% 50V 33P	
C7031	VCYSARH330J	CERAMIC +-5% 50V 33P	
C7032	VCYSARH330J	CERAMIC +-5% 50V 33P	
C801	ECKM2H472PE7	CERAMIC +100%-0% 500V 0.0047	▲
	OR ECKM2H472PU7	CERAMIC +100%-0% 500V 0.0047	▲
	OR ECKW2H472PU7	CERAMIC +100%-0% 500V 0.0047	▲
C802	ECKM2H472PE7	CERAMIC +100%-0% 500V 0.0047	▲
	OR ECKM2H472PU7	CERAMIC +100%-0% 500V 0.0047	▲
	OR ECKW2H472PU7	CERAMIC +100%-0% 500V 0.0047	▲
C804	ECKM2H472PE7	CERAMIC +100%-0% 500V 0.0047	▲
	OR ECKM2H472PU7	CERAMIC +100%-0% 500V 0.0047	▲
	OR ECKW2H472PU7	CERAMIC +100%-0% 500V 0.0047	▲
C805	EC0S2DP681BB	ELECTROLYTIC 200V 680	▲
C807	ECKCNS223ZV	CERAMIC +80%-20% 125V 0.022	▲
	OR ECKDNS223ZV	CERAMIC +80%-20% 125V 0.022	▲
C808	ECEA160V33ZE	ELECTROLYTIC 160V 33	▲
C810	VCKSFVK332MY	CERAMIC +-20% 125V 0.0033	▲
	OR VCKSFVK332MY	CERAMIC +-20% 125V 0.0033	▲
	OR VCKSFVK332MY	CERAMIC +-20% 125V 0.0033	▲
C811	ECKCNS223ZV	CERAMIC +80%-20% 125V 0.022	▲
	OR ECKDNS223ZV	CERAMIC +80%-20% 125V 0.022	▲
C814	ECKDRS103ZV	CERAMIC +80%-20% 125V 0.01	
		<b>COILS</b>	
L551	ELH5L7017		AKEI
L552	TSC925		
L553	TLH15907		
L7001	VLQSG06R221K	220	
L7002	ELESN101KA	100	
L801	ELF18D650B		▲
		<b>PIN HEADERS</b>	
P201	VJSS0817	CONNECTOR RECEPTACLE 11P	AKEI
P202	VJSS0816	CONNECTOR RECEPTACLE 7P	AKEI

Ref. No.	Part No.	Part Name	Remarks
P203	VJSS0872	CONNECTOR RECEPTACLE 19P	AKEI
P204	VJPS0257		2P
P801	VJPS0748		3P
P802	VJPS0303		3P
P803	VEKS5395	P803 CONNECTOR ASS'Y	AKEI
		<b>FUSE &amp; PROTECTOR</b>	
F801	XBA1F40NU100	FUSE 125V 4A	▲
		<b>RELAY</b>	
RL801	TSE1860-1		▲
		<b>TRANSFORMER</b>	
T501	ETH19Y70AY		
T502	ETE16Z37AY		▲
T551(E57)	LLF76501F	FLYBACK TRANSFORMER	▲ AKEI
		<b>PRINTED CIRCUIT BOARD ASSEMBLY</b>	
E8	TNP73154GG	CRT C.B.A.	▲ AKEI
		<b>MISCELLANEOUS</b>	
E72	TJC6319	FUSE HOLDER	
E59	TMM16480-1	CLAMPER	
E62	TMM76403-1	CLAMPER	
E74	TSX7151-N	AC CORD	▲ AKEI
E31	TUC77542	FBT SHIELD CASE	AKEI
E61	TUC77625	HEAT SINK PLATE	AKEI
E47	TUC77626-1	HEAT SINK PLATE	AKEI
E12	VEQS0584	UHF/VHF TUNER/TV DEMODULATOR	
		UNIT NR	
E67	VZFS0006S	CLAMPER	
E50	XTV3+10G	TAPPING SCREW 3X10	
E35	XYN3+F10S	SCREW WITH WASHER 3X10	
E48	XYN3+F6S	SCREW WITH WASHER 3X6	
		<b>CRT C.B.A.</b>	▲
		<b>TRANSISTORS</b>	
Q351	25C1473(QNC)	( A, B, C, D, E, F, G )	
	25C3063(RL)	( H, I, J, K, L )	
Q352	25C1473(QNC)	( A, B, C, D, E, F, G )	
	25C3063(RL)	( H, I, J, K, L )	
Q353	25C1473(QNC)	( A, B, C, D, E, F, G )	
	25C3063(RL)	( H, I, J, K, L )	
		<b>RESISTORS</b>	
R351	ERG1ANJP153H	METAL OXIDE 1W 15K	▲ AKEI
	OR ERG1ANJP153V	METAL OXIDE 1W 15K	▲
	OR ERG1ANJ153H	METAL OXIDE 1W 15K	▲
	OR KRG1ANJ153H	METAL OXIDE 1W 15K	▲
	( A, B, C, D, E, F, G )		
	ERG2ANJP153H	METAL OXIDE 2W 15K	▲
	OR ERG2ANJ153H	METAL OXIDE 2W 15K	▲
	( H, I, J, K, L )		
R352	ERG1ANJP153H	METAL OXIDE 1W 15K	▲ AKEI
	OR ERG1ANJP153V	METAL OXIDE 1W 15K	▲
	OR ERG1ANJ153H	METAL OXIDE 1W 15K	▲
	OR KRG1ANJ153H	METAL OXIDE 1W 15K	▲
	( A, B, C, D, E, F, G )		
	ERG2ANJP153H	METAL OXIDE 2W 15K	▲
	OR ERG2ANJ153H	METAL OXIDE 2W 15K	▲
	( H, I, J, K, L )		

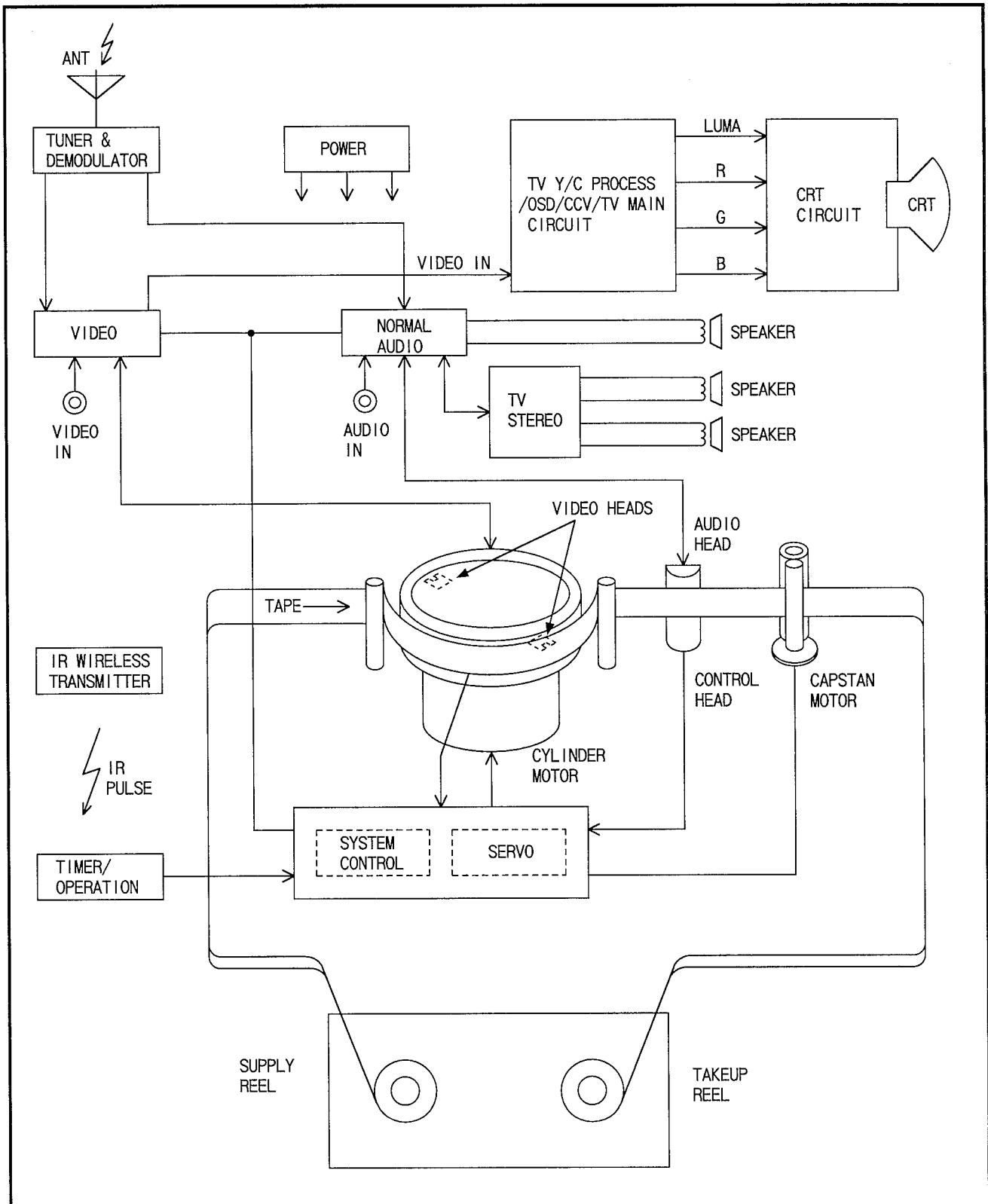


Ref. No.	Part No.	Part Name	Remarks
		<b>SUMMARY OF "E" ITEM NUMBERS REFER TO ELECTRICAL PARTS LIST FOR MODEL INFORMATION</b>	
E1	VEPS3031B1	MAIN C.B.A.	
E1	VEPS3031C1	MAIN C.B.A.	
E1	VEPS3031A1	MAIN C.B.A.	
E1	VEPS3031F1	MAIN C.B.A.	
E1	VEPS3031G1	MAIN C.B.A.	
E1	VEPS3031D1	MAIN C.B.A.	
E1	VEPS3034C1	MAIN C.B.A.	
E2	VEPS1003A1	POWER SUPPLY C.B.A.	
E3	VEPS07591A1	OPERATION I C.B.A.	
E3	VEPS07597A1	OPERATION I C.B.A.	
E3	VEPS07593A1	OPERATION I C.B.A.	
E3	VEPS07603A1	OPERATION I C.B.A.	
E4	VEPS07592C1	OPERATION II C.B.A.	
E4	VEPS07592A1	OPERATION II C.B.A.	
E4	VEPS07598B1	OPERATION II C.B.A.	
E4	VEPS07594A1	OPERATION II C.B.A.	
E4	VEPS07604A1	OPERATION II C.B.A.	
E5	VEPS02221B1	CAPSTAN MOTOR DRIVE C.B.A.	
E6	VEPS5001CA1	HEAD AMP C.B.A.	
E6	VEPS5002CA1	HEAD AMP C.B.A.	
E7	LRM61001YZ	TV MAIN C.B.A.	
E7	LRM61001YA	TV MAIN C.B.A.	
E7	LRM61001ZZ	TV MAIN C.B.A.	
E7	LRM61001XZ	TV MAIN C.B.A.	
E7	LRM61001XA	TV MAIN C.B.A.	
E7	LRM61001ZA	TV MAIN C.B.A.	
E7	LRM61001BZ	TV MAIN C.B.A.	
E7	LRM61001GZ	TV MAIN C.B.A.	
E7	LRM61001GA	TV MAIN C.B.A.	
E7	LRM61001AZ	TV MAIN C.B.A.	
E7	VEBS0254B1	TV MAIN C.B.A.	
E8	TNP73154EE	CRT C.B.A.	
E8	TNP73154FF	CRT C.B.A.	
E8	TNP73154GG	CRT C.B.A.	
E9	VEPS4006A1	TV STEREO AMP C.B.A.	
E10	VEPS4009A1	TV STEREO C.B.A.	
E11	VJHS0353	A/V JACK	
E12	VEQS0583	UHF/VHF TUNER/TV DEMODULATOR UNIT NR	
E12	VEQS0584	UHF/VHF TUNER/TV DEMODULATOR UNIT NR	
E14	VSCS2035	SHIELD CASE TOP	
E15	VJSS0164	FUSE HOLDER	
E16	VSCS2507	SHIELD CASE BODY	
E19	GP1U272X	INFRARED RECEIVER UNIT	
E19	SPS-420-2-B	INFRARED RECEIVER UNIT	
E20	Z5C4130LF608	TRANSISTOR	
E20	Z5C4559LP.KT	TRANSISTOR	
E21	VMXS0583	LED SPACER	
E24	VJBS00C05	LOADING MOTOR P.C.B.	
E25	VJWS7AB107LL	FLAT CABLE 7P	
E27	VSS0150	MODE SELECT SWITCH	
E28	VMAS1912	P.C.B. SUPPORT ANGLE	
E29	VEKS5333	PHOTO SENSOR UNIT	
E30	VEKS5334	SENSOR LED UNIT	
E31	TUC77542	FBT SHIELD CASE	
E32	TUC76649-4	HEAT SINK PLATE	
E33	VSCS1072	HEAT SINK PLATE	
E34	XNG3	M3 NUT	
E35	XYN3+F10S	SCREW WITH WASHER 3X10	
E39	VMXS0575	LED SPACER	
E42	TJS1A5050	CRT SOCKET	
E42	TJS1A5081	CRT SOCKET	
E43	TXAJT01135	FOCUS/SCREEN COUPLER	
E43	TXAJT01205	FOCUS/SCREEN COUPLER	
E45	VMTS0035	CUSHION	
E46	VEKS5441	SAFETY TAB SWITCH UNIT	
E47	TUC76677-1	HEAT SINK PLATE	
E47	TUC77626	HEAT SINK PLATE	
E48	XYN3+F6S	SCREW WITH WASHER 3X6	
E50	XTV3+10G	TAPPING SCREW 3X10	
E53	Z5D1555LBMTV	TRANSISTOR	
E53	Z5D2499LBMA	TRANSISTOR	
E54	LA7837	IC BIPOLAR LINEAR VERTICAL OUT	
E55	VJWS9AN105BB	FLAT CABLE 9P	

Ref. No.	Part No.	Part Name	Remarks
E55	VJWS8AN105BB	FLAT CABLE 8P	
E55	VJWS8BN108B	FLAT CABLE 8P	
E57	TLF14767F2	FLYBACK TRANSFORMER	
E57	TLF15575F	FLYBACK TRANSFORMER	
E57	LLF76501F	FLYBACK TRANSFORMER	
E59	TMM16480-1	CLAMPER	
E61	TUC77625	HEAT SINK PLATE	
E62	TMM76403-1	CLAMPER	
E64	XTW3+10J	TAPPING SCREW 3X10	
E66	TUC77616	GROUNDING PLATE	
E66	TUC77603-1	GROUNDING PLATE	
E66	TUC77627	GROUNDING PLATE	
E67	VZFS0006S	CLAMPER	
E69	STR30130	IC BIPOLAR LINEAR +130V REGULATOR	
E70	VEKS5508	P3004,P4153 CONNECTOR ASS'Y	
E70	VEKS5354	P3004,P4904 CONNECTOR ASS'Y	
E71	VJSS332S	FUSE HOLDER	
E72	TJC6319	FUSE HOLDER	
E73	TMM77412	CLAMPER	
E74	TSX7151-N	AC CORD	
E74	TSX7152-N	AC CORD	
E75	VMXS0876	P.C.B. SPACER A	
E76	AN7140	IC BIPOLAR LINEAR AUDIO AMP	
E77	VMXS0871	SPACER	
E78	VSCS2055	SHIELD CASE BODY	
E79	VSCS2056	SHIELD CASE BOTTOM	
E81	VEPS4011A1	AUDIO/VIDEO JACK C.B.A.	
E81	VEPS04128C1	AUDIO/VIDEO JACK C.B.A.	
E81	VEPS04128D1	AUDIO/VIDEO JACK C.B.A.	
E83	VEPS01048C1	STEREO AMP/TV AVR C.B.A.	
E84	VEPS01049A1	POWER AMP C.B.A.	

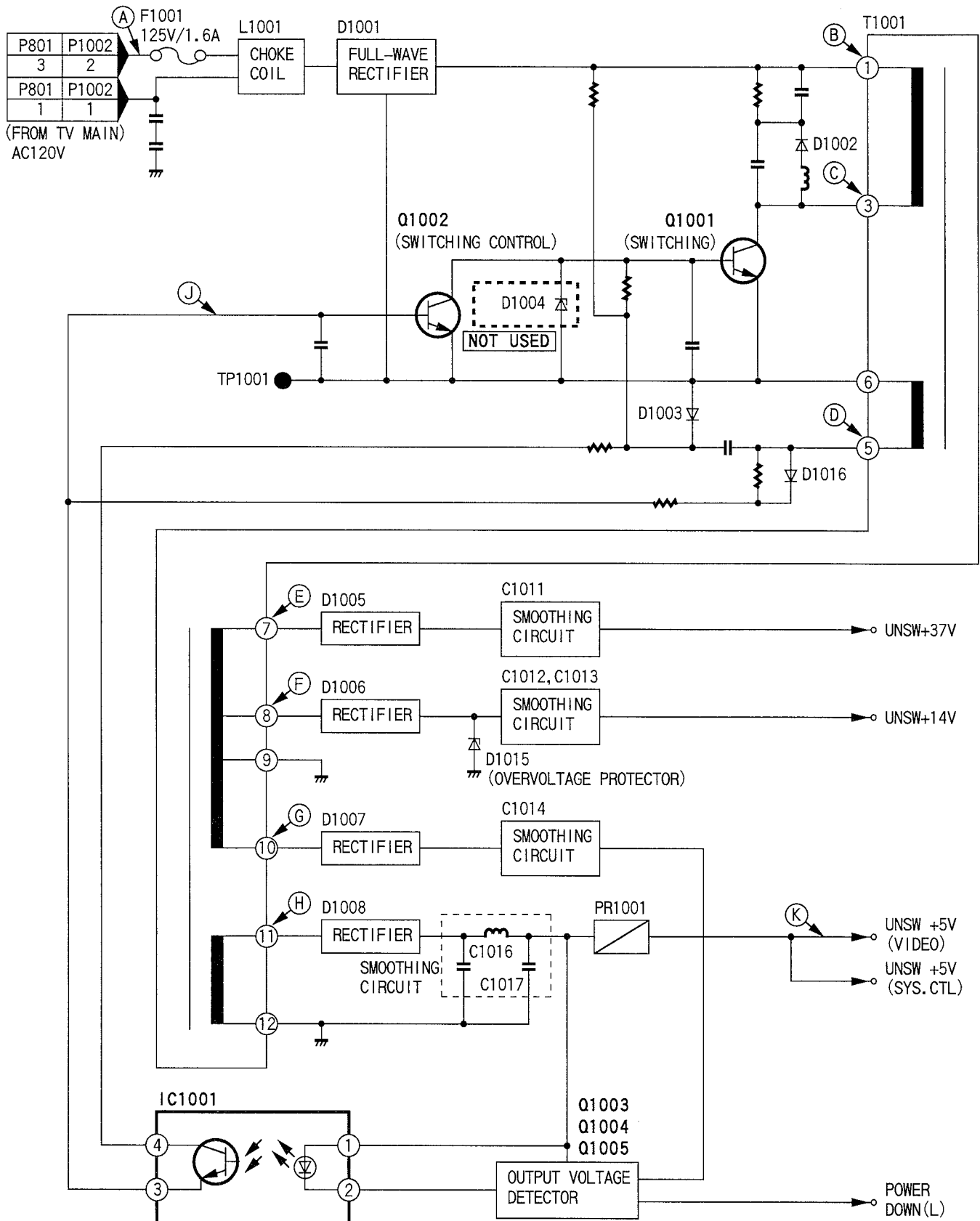
# VII. BLOCK DIAGRAMS

## OVERALL BLOCK DIAGRAM



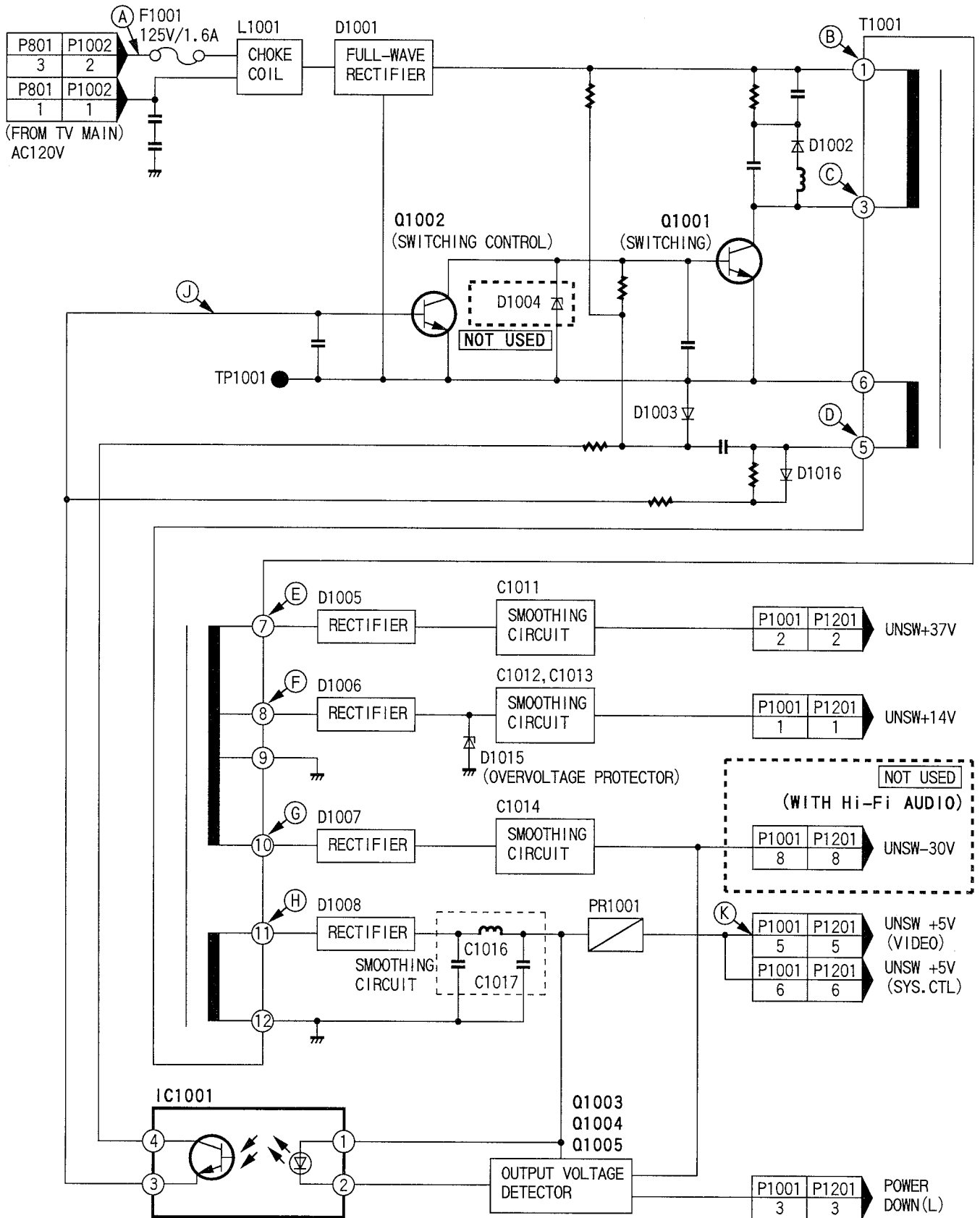
# POWER SUPPLY BLOCK DIAGRAM

(FOR MODELS PV-M1326/PV-M1326W/VV1306/VV1306B/VV1316W  
/PV-M1346/PV-M1356W/PV-M2036/VV2006/VV2016W/PV-M2046)

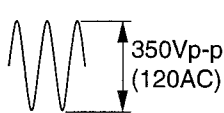
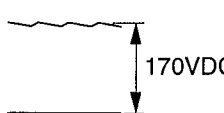
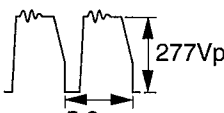
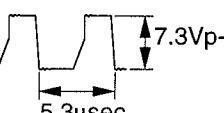
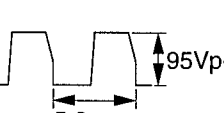
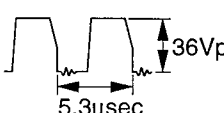
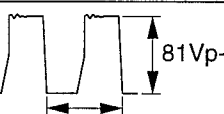
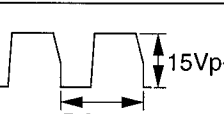
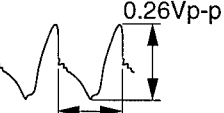


# POWER SUPPLY BLOCK DIAGRAM

(FOR MODEL VV2706)



# WAVEFORM OF POWER SUPPLY STAGE

No	WAVEFORM	NOTE	No	WAVEFORM	NOTE	No	WAVEFORM	NOTE
(A)			(B)		TP1001	(C)		TP1001
(D)		TP1001	(E)		CHASSIS GND	(F)		CHASSIS GND
(G)		CHASSIS GND	(H)		CHASSIS GND			
(J)		TP1001						

NOTE: WAVEFORMS MEASURED IN STOP MODE.

## POWER SUPPLY CHECKING PROCEDURE 1

SYMPTOM	FLOW OF TROUBLESHOOT →							
No Power (Secondary circuit)	CHECK POINT	(K)	(E)	(F)	(G)	(H)		
	IF NO.	↓		↓				
	CHANGE	PR1001		* NOTE1		* NOTE2		

\* NOTE1: If voltage is not correct, check primary circuit.

\* NOTE2: If all voltage is correct, check System Control circuit or adjust Gear phase.

SYMPTOM	FLOW OF TROUBLESHOOT →							
No Power (Primary circuit)	CHECK POINT	(A)	(B)	(C)	(D)	(J)		
	IF NO.	↓		↓				
	CHANGE	* NOTE1		F1001 Q1001 Q1002	* NOTE2			

\* NOTE1: Check TV Power Circuit or AC cord.

\* NOTE2: Change Q1001, Q1002 and F1001 at the same time.

SYMPTOM	FLOW OF TROUBLESHOOT →							
	CHECK POINT							
	IF NO.							
	CHANGE							

NOTE: Please use blank brackets to note additional information.

# POWER SUPPLY CHECKING PROCEDURE 2

## (1). SHORT-CIRCUIT AND REPLACEMENT PARTS ON POWER LINE.

	CONDITION OF SHORT-CIRCUIT	DAMAGEABLE PARTS BY SHORT-CIRCUIT
(1)	5V ➡ GND	*PR1001, *D1008, Q1005
(2)	37V ➡ GND	*D1005, *R1010
(3)	14V ➡ GND 12V ➡ GND	D1006, *D1015, Q1051, *Q1052 D1051, D1052, D1053, C1012, *PR1050
(4)	-30V ➡ GND	*R1011, *D1007
(5)	37V ➡ 14V	D1006, *D1015, Q1051, *Q1052 D1051, D1052, D1053, *PR1050
(6)	-30V ➡ 5V	REPLACE THE ALL OF PARTS OF (1) AND (4)
(7)	14V ➡ 12V	*Q1051, *Q1052, D1051, D1052, D1053, *PR1050
(8)	37V ➡ POWER DOWN(L)	*Q1005

\*NOTE1: When parts are short circuited, supplying the Power for a long time may cause the fuse to blow.

\*NOTE2: Parts with \* mark are most susceptible to damage in case of short circuit. Please check them first.

## (2). IN CASE OF FUSE(F1001) BLOW.

Replace Parts F1001, Q1001, Q1002, D1001(Very rarely has problems), C1012, D1015.

Cause ➡ It may be caused by a short-circuit of 5V or 14V.

## (3). JUST AFTER TURNING POWER ON, ABNORMAL NOISE CAN BE HEARD FROM POWER SUPPLY CIRCUIT.

Replace Parts D1015, D1008, D1007, R1011, C1012.

Cause ➡ It may be caused by a short-circuit of 5V, -30V, 14V.

In such a condition, supplying the Power for a long time causes the fuse to blow.



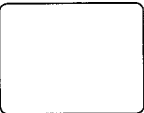
# WAVEFORM OF VIDEO STAGE

\*NOTE: 1. The measurement mode of the waveforms in brackets on this chart is Record and Playback modes with NTSC color bar signal.  
2. Please use blank brackets to note additional information.

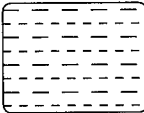
No	WAVEFORM	NOTE	No	WAVEFORM	NOTE	No	WAVEFORM	NOTE
V1 V2 Ⓓ Ⓔ Ⓕ		V1,V2,Ⓓ,Ⓔ =REC Ⓔ =P.B	V3		REC/P.B	V4		P.B
V5		P.B	V6		P.B	V7		REC "A"= 0.34Vp-p P.B "A"= 0.40Vp-p
V8		REC/P.B	V9		P.B	V10		REC/P.B
V11 Ⓐ		REC/P.B	Ⓑ		REC (SP/LP /SLP)	Ⓑ		2HEAD "A"= 340mVp-p 4HEAD "A"= 480mVp-p P.B(SP)
Ⓑ		2HEAD "A"= 240mVp-p 4HEAD "A"= 320mVp-p P.B(LP)	Ⓑ		2HEAD "A"= 210mVp-p 4HEAD "A"= 240mVp-p P.B(SLP)	Ⓒ		REC/P.B "A"=1.2Vp-p
AU1 AU2		REC "A"=120mVp-p	AU3		REC "A"=2.3Vp-p	AU4		P.B "A"=120mVp-p
CT1		EE(H) /VV(M) /CUE/REV /SLOW /STILL(L) "A"=5Vp-p "B"=2.5Vp-p	CT2		LINE(H) /TUNER(L)	CT3		CUE/REV /SLOW /STILL (EE/VV= Low(0V))
CT4		REC(H) PB(L)	CT5		AUDIO MUTE(H)	CT6		VIDEO DELAY REC(H)
CT7		REC "A"= 5.2Vp-p P.B "A"= 4.6Vp-p						
Ⓐ			Ⓑ		STILL (SP)	Ⓑ		CUE/REV
Ⓑ		P.B (SLP(H))	Ⓑ		P.B (SP(L))	Ⓒ		VIDEO DELAY REC +12V
Ⓕ			Ⓖ		REC	Ⓖ		REC (SP/LP /SLP)

# VIDEO CHECKING PROCEDURE


(FOR MODELS PV-M1326/PV-M1326W/VV1306/VV1306B/VV1316W /PV-M1346/PV-M1356W/PV-M2036/VV2006/VV2016W/PV-M2046)

SYMPTOM	FLOW OF TROUBLESHOOT →								
	MODE		REC			PB		REC/PB	
	CHECK POINT	OSD	V1 or V2	CT2	CT1	CT3	V10	TP3001	TV
	IF NO.		↓	↓	↓	↓	↓	↓	↓
	CHANGE	* NOTE1	* NOTE2	* NOTE3	* NOTE4	* NOTE5	IC3001 * NOTE6	IC3001	* NOTE7

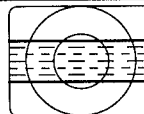
- \* NOTE1: Check if OSD works OK. If not, check signal (A) at TP3001. If signal is OK, check IC3301 and TV circuit.
- \* NOTE2: Check UHF/VHF Tuner/TV Demodulator Ass'y or Video In Terminal.
- \* NOTE3: Check signal line and IC6001.
- \* NOTE4: Check Video EE(H) signal.
- \* NOTE5: Check if CT3 signal is Low. If not, check signal line and IC6001.
- \* NOTE6: Check if Sync signal is OK. If incorrect, change IC3001.
- \* NOTE7: Check TV Main Circuit.

SYMPTOM	FLOW OF TROUBLESHOOT →									
		CHECK POINT	V1 or V2	CT2	CT1	TP3002	(a)	(b)	(c)	TP3501
IF NO.		↓	↓	↓	↓			↓	↓	↓
CHANGE		* NOTE1	* NOTE2	* NOTE3	IC3001 * NOTE4	* NOTE5	Check Signal Line	IC3501 * NOTE6	UPPER CYLINDER * NOTE7	


- \* NOTE1: Check UHF/VHF Tuner/TV Demodulator Ass'y or Video In Terminal.
- \* NOTE2: Check signal line and IC6001.
- \* NOTE3: Check Video EE(H) signal.
- \* NOTE4: Check Pin49 of IC3001 is not Low(PB(L)). If High, change IC3001. If Low, check signal Line and IC6001.
- \* NOTE5: Check Cylinder FG/PG signal at pin 61 of IC6001.
- \* NOTE6: Check if TP3501 is 4±1Vp-p. If not, change IC3501.
- \* NOTE7: Try head cleaning.

SYMPTOM	FLOW OF TROUBLESHOOT →								
		CHECK POINT	TP3002	TP3001					
IF NO.		↓	↓						
CHANGE		HEAD AMP	* NOTE1						

- \* NOTE1: Check V7 signal. If incorrect, change IC3001. If OK, check V8 signal. If V8 is not correct, change IC3201. If OK, change IC3001.

SYMPTOM	FLOW OF TROUBLESHOOT →							
		CHECK POINT	(d)	(e)	(f)	(g)	(a)	(b)
IF NO.		↓				↓		↓
CHANGE		UPPER CYLINDER * NOTE1				* NOTE2		SEE SERVO SECTION


- \* NOTE1: Try head cleaning.
- \* NOTE2: Check Cylinder FG/PG signal at pin 61 of IC6001.

SYMPTOM	FLOW OF TROUBLESHOOT →								
		CHECK POINT	TP3002	TP3001	TV				
IF NO.		↓	↓	↓					
CHANGE		* NOTE1	IC3001	* NOTE2					

- \* NOTE1: Try head cleaning and check Head Amp Shield Case or signals (d) to (g), (a) and (b).
- \* NOTE2: Check TV Main Circuit.

# VIDEO CHECKING PROCEDURE

## (FOR MODEL VV2706)

SYMPTOM	FLOW OF TROUBLESHOOT →										
	MODE	REC					PB			REC/PB	
	CHECK POINT	OSD	Ⓓ or Ⓔ	CT2	CT1	CT3	V10	V11	Ⓕ	TP3001	TV
	IF NO.		↓	↓	↓	↓	↓	↓	↓	↓	↓
	CHANGE	* NOTE1	* NOTE2	* NOTE3	* NOTE4	* NOTE5	IC3001 * NOTE6	IC3001	Q3005	IC3002	* NOTE7

\* NOTE1: Check if OSD works OK. If not, check signal Ⓐ at TP3001. If signal is OK, check IC3301 and TV circuit.

\* NOTE2: Check UHF/VHF Tuner/TV Demodulator Ass'y or Video In Terminal.

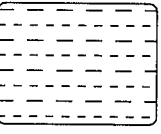
\* NOTE3: Check signal line and IC6001.

\* NOTE4: Check Video EE(H) signal.

\* NOTE5: Check if CT3 signal is Low. If not, check signal line and IC6001.

\* NOTE6: Check if Sync signal is OK. If incorrect, change IC3001.

\* NOTE7: Check TV Main Circuit.

SYMPTOM	FLOW OF TROUBLESHOOT →										
		CHECK POINT	Ⓓ or Ⓔ	CT2	CT1	V1	TP3002	Ⓐ	Ⓑ	Ⓒ	TP3501
IF NO.		↓	↓	↓		↓		↓		↓	↓
CHANGE		* NOTE1	* NOTE2	* NOTE3	IC3002	IC3001 * NOTE4	* NOTE5	Check Signal Line		IC3501 * NOTE6	UPPER CYLINDER * NOTE7

\* NOTE1: Check UHF/VHF Tuner/TV Demodulator Ass'y or Video In Terminal.

\* NOTE2: Check signal line and IC6001.

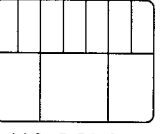
\* NOTE3: Check Video EE(H) signal.

\* NOTE4: Check CT4 signal is not Low(PB(L)). If High, change IC3001. If Low, check signal Line and IC6001.

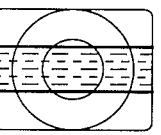
\* NOTE5: Check Cylinder FG/PG signal at pin 61 of IC6001.

\* NOTE6: Check if TP3501 is 4±1Vp-p. If not, change IC3501.

\* NOTE7: Try head cleaning.

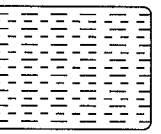
SYMPTOM	FLOW OF TROUBLESHOOT →										
		CHECK POINT	TP3002	V11							
IF NO.		↓	↓								
CHANGE		HEAD AMP	* NOTE1								

\* NOTE1: Check V7 signal. If incorrect, change IC3001. If OK, check V8 signal. If V8 is not correct, change IC3201. If OK, change IC3001.

SYMPTOM	FLOW OF TROUBLESHOOT →										
		CHECK POINT	Ⓓ	Ⓔ	Ⓕ	Ⓖ	Ⓐ	Ⓑ	—		
IF NO.				↓			↓			↓	
CHANGE				UPPER CYLINDER * NOTE1			* NOTE2			SEE SERVO SECTION	

\* NOTE1: Try head cleaning.

\* NOTE2: Check Cylinder FG/PG signal at pin 61 of IC6001.

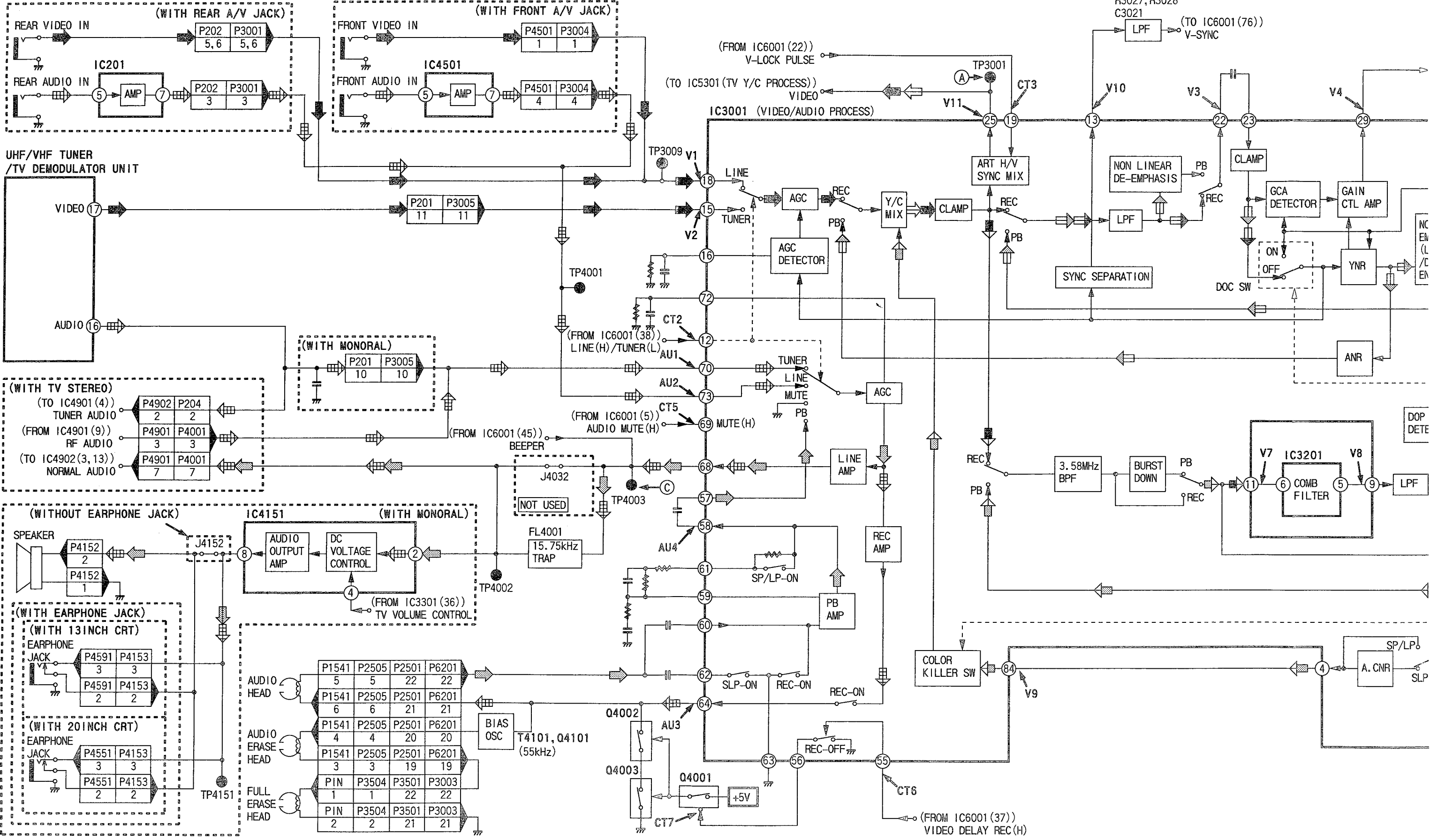
SYMPTOM	FLOW OF TROUBLESHOOT →										
		CHECK POINT	TP3002	TP3001	TV						
IF NO.		↓	↓	↓							
CHANGE		* NOTE1	IC3001	* NOTE2							

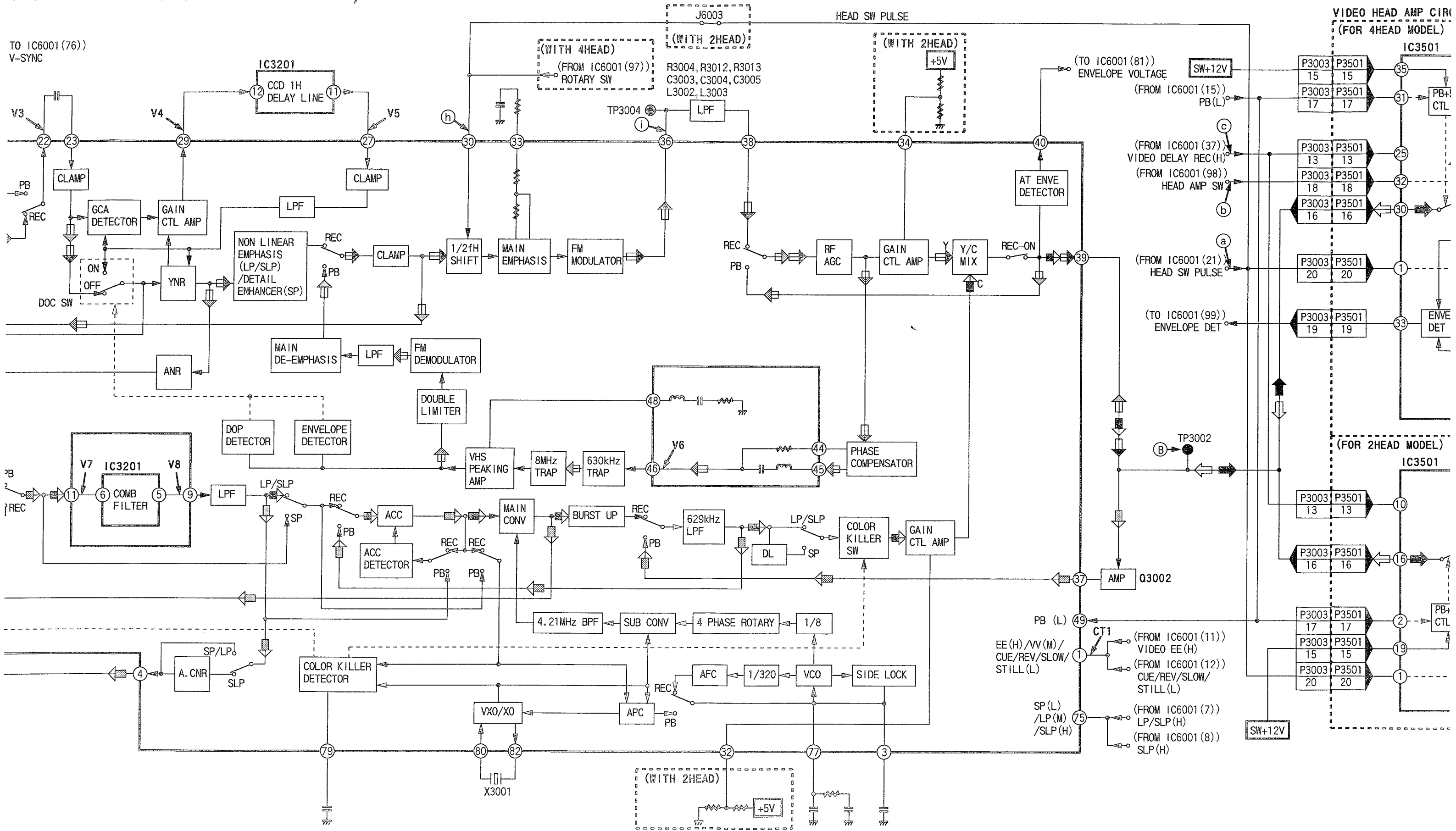
\* NOTE1: Try head cleaning and check Head Amp Shield Case or signals (d) to (g), (a) and (b).

\* NOTE2: Check TV Main Circuit.

# VIDEO/NORMAL AUDIO BLOCK DIAGRAM (FOR MODELS PV-M1326/PV-M1326W/VV1306/VV1306B/VV1316W/PV-M1346/PV-M1356W/PV-M2036/VV2006/VV2016)

← REC LUMINANCE  
 ← REC CHROMINANCE  
 ← REC VIDEO  
 ← PB LUMINANCE  
 ← PB CHROMINANCE  
 ← PB VIDEO  
 ← REC AUDIO  
 ← PB AUDIO

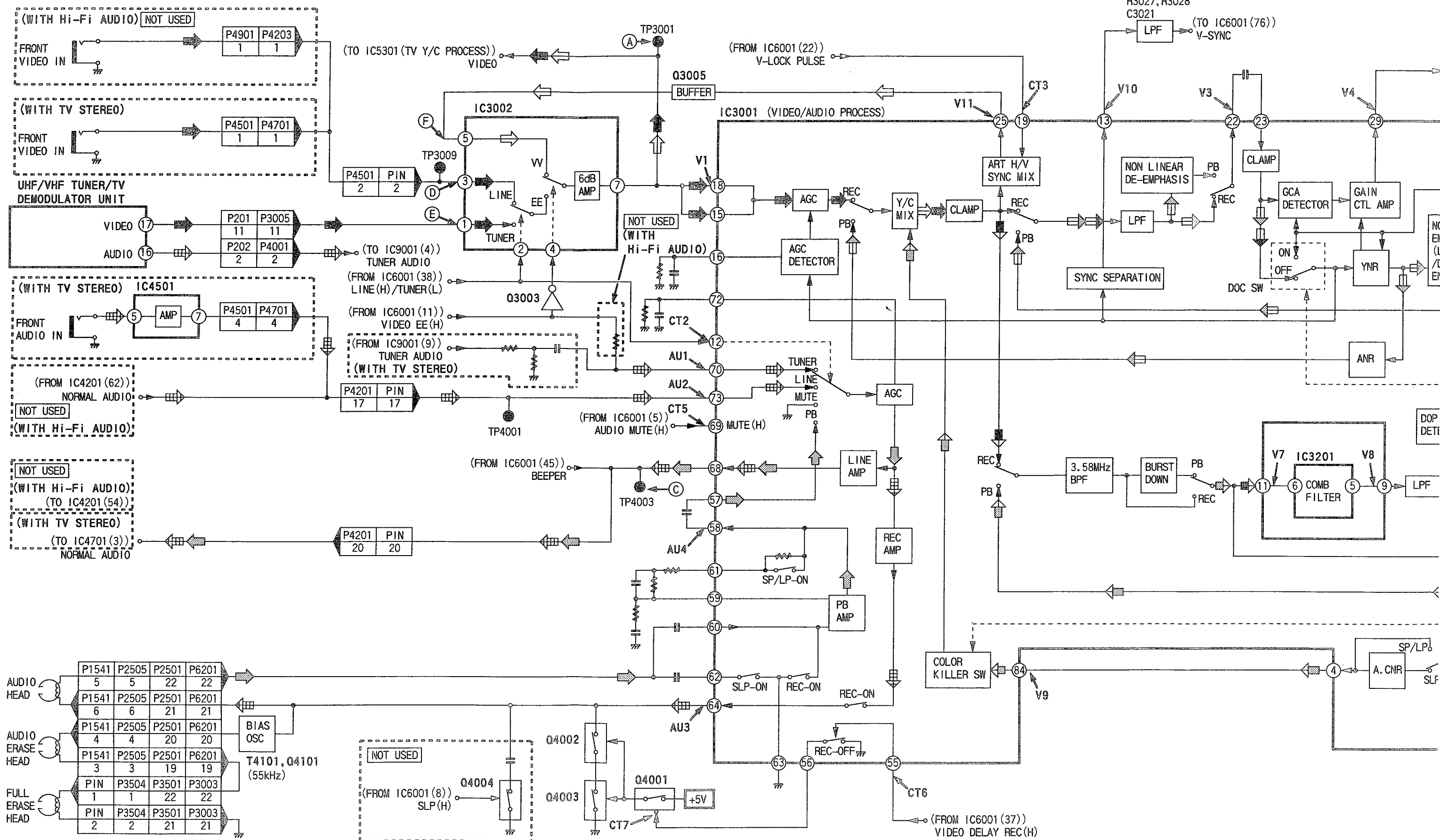


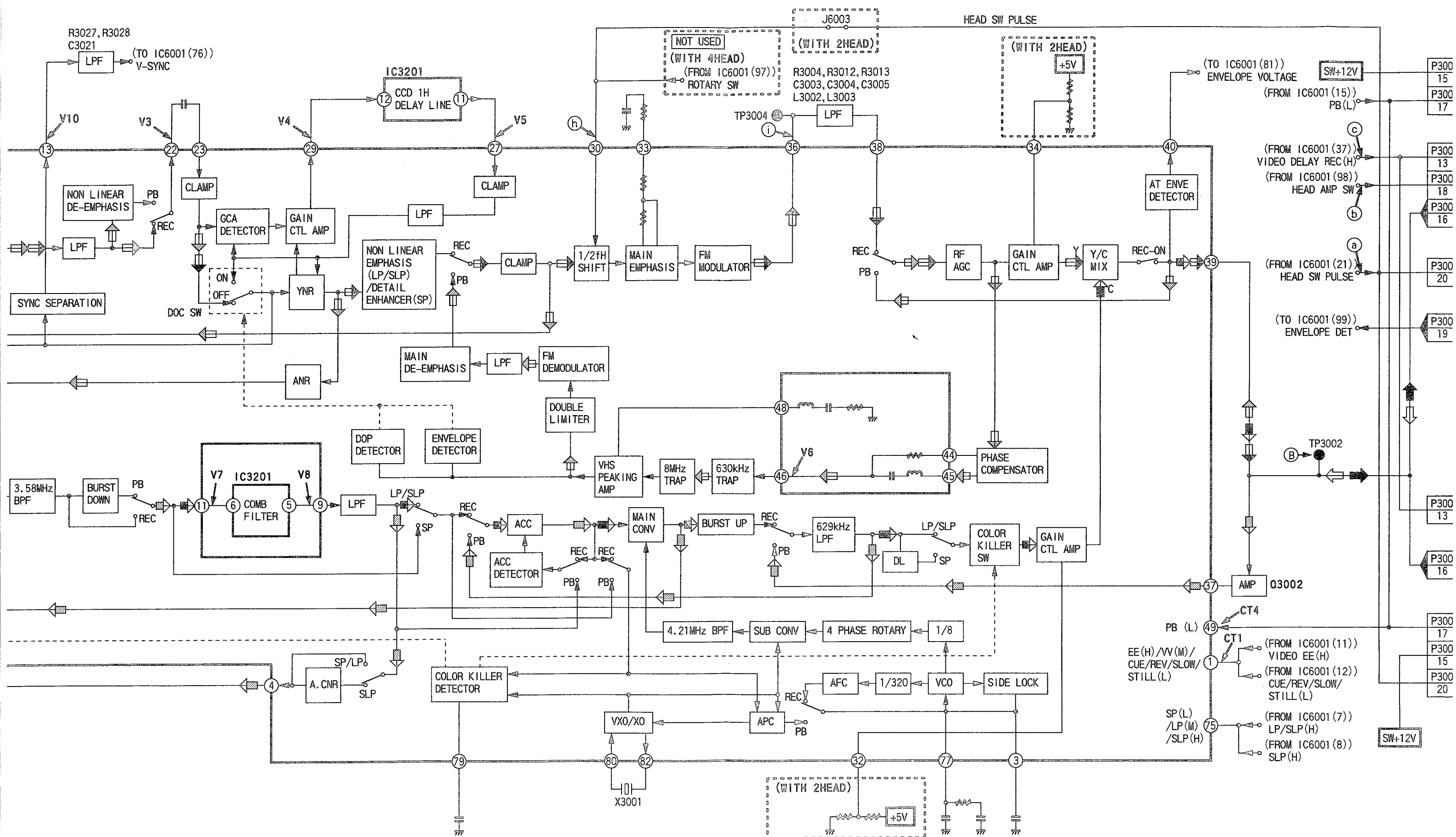




# VIDEO/NORMAL AUDIO BLOCK DIAGRAM (FOR MODEL VV2706)

← REC LUMINANCE  
 ← REC CHROMINANCE  
 ← REC VIDEO  
 ← PB LUMINANCE  
 ← PB CHROMINANCE  
 ← PB VIDEO  
 ← REC AUDIO  
 ← PB AUDIO



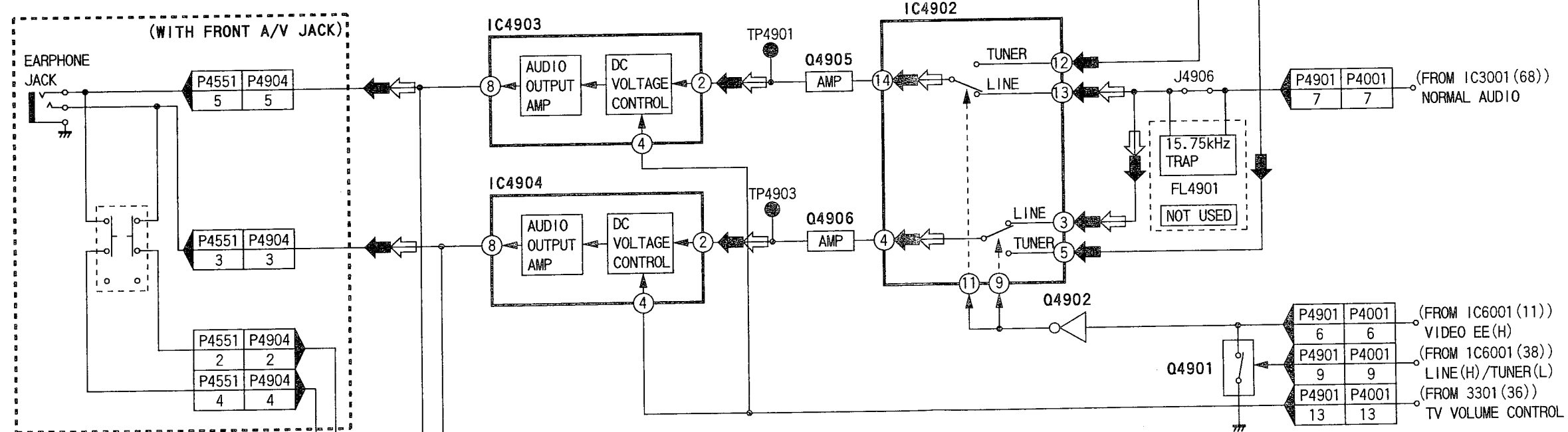
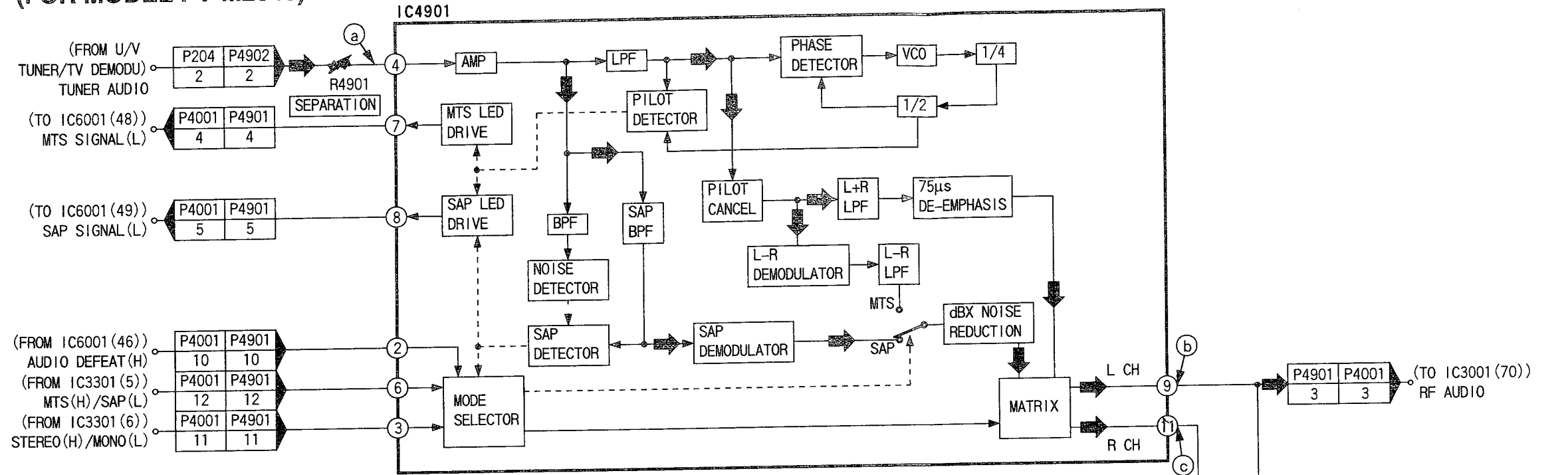






# TV STEREO/MTS/SAP BLOCK DIAGRAM (FOR MODEL PV-M2046)

← REC AUDIO ← PB AUDIO



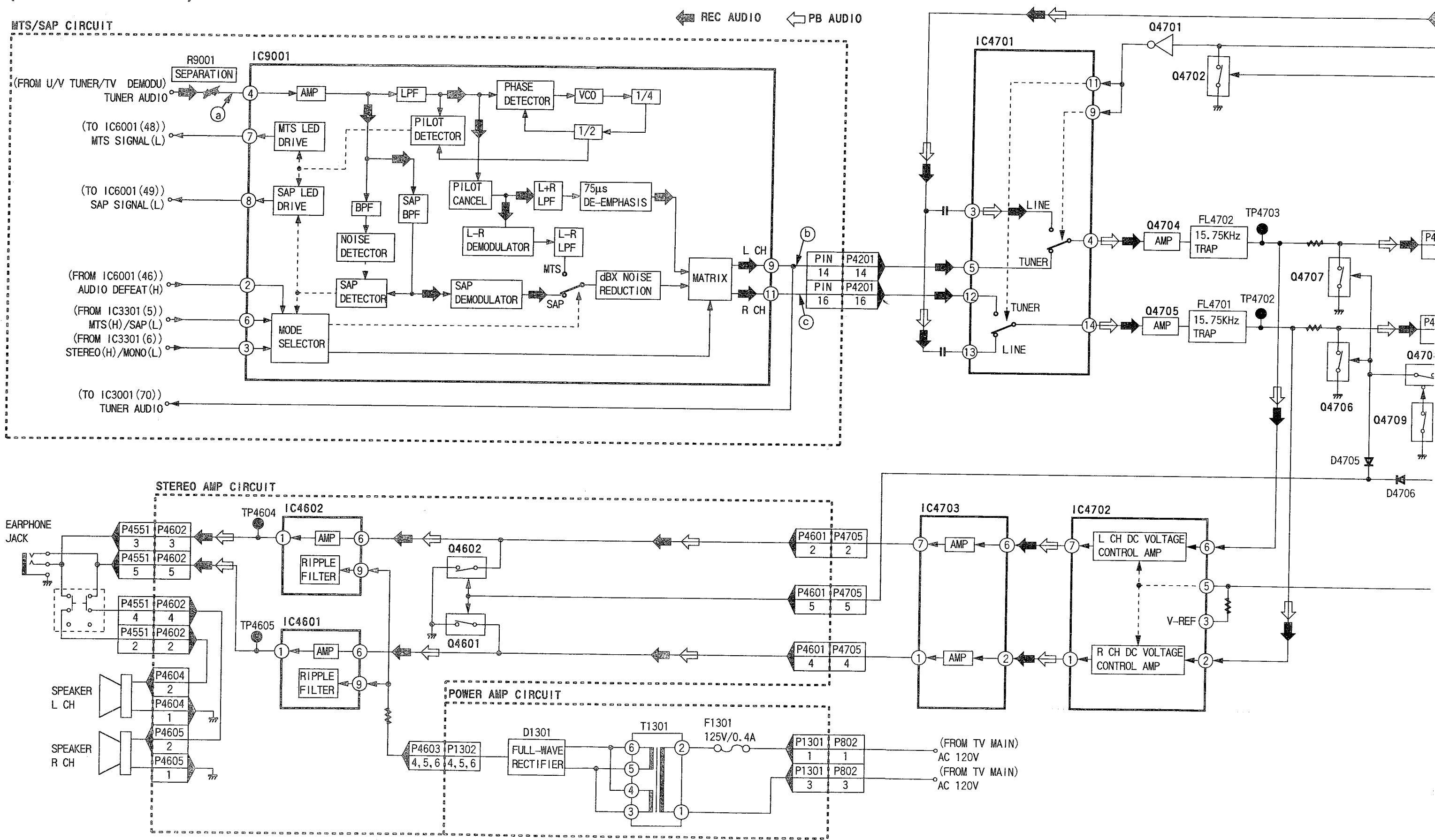
## WAVEFORM OF TV STEREO/MTS/SAP STAGE

No	WAVEFORM	NOTE	No	WAVEFORM	NOTE	No	WAVEFORM	NOTE
a		MTS L-CH (300Hz)	b		MTS L-CH (300Hz)	b		SAP (300Hz)
			c			c		

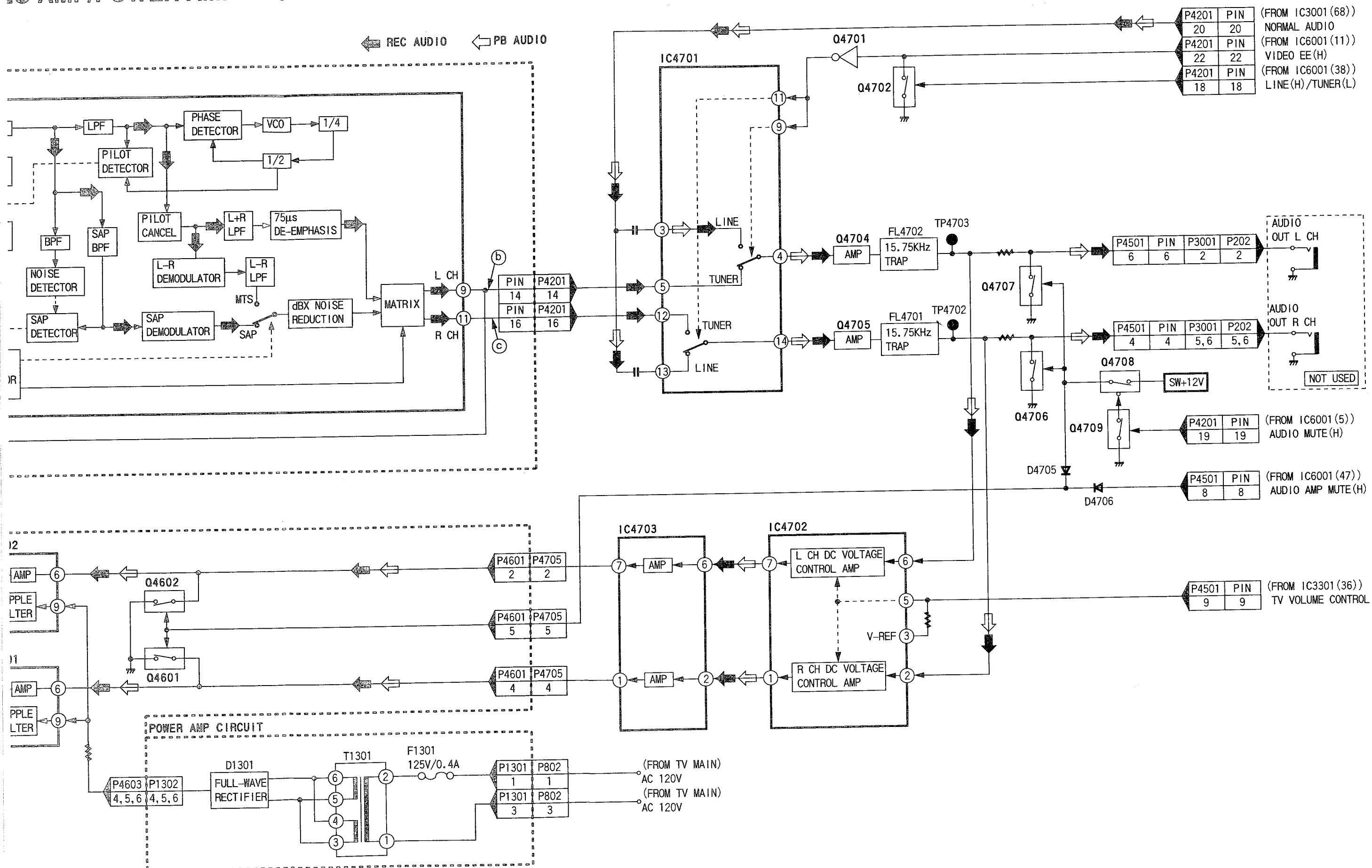
NOTE: Please use blank brackets to note additional information.

# TV STEREO/MTS/SAP/STEREO AMP/POWER AMP BLOCK DIAGRAM

(FOR MODEL VV2706)

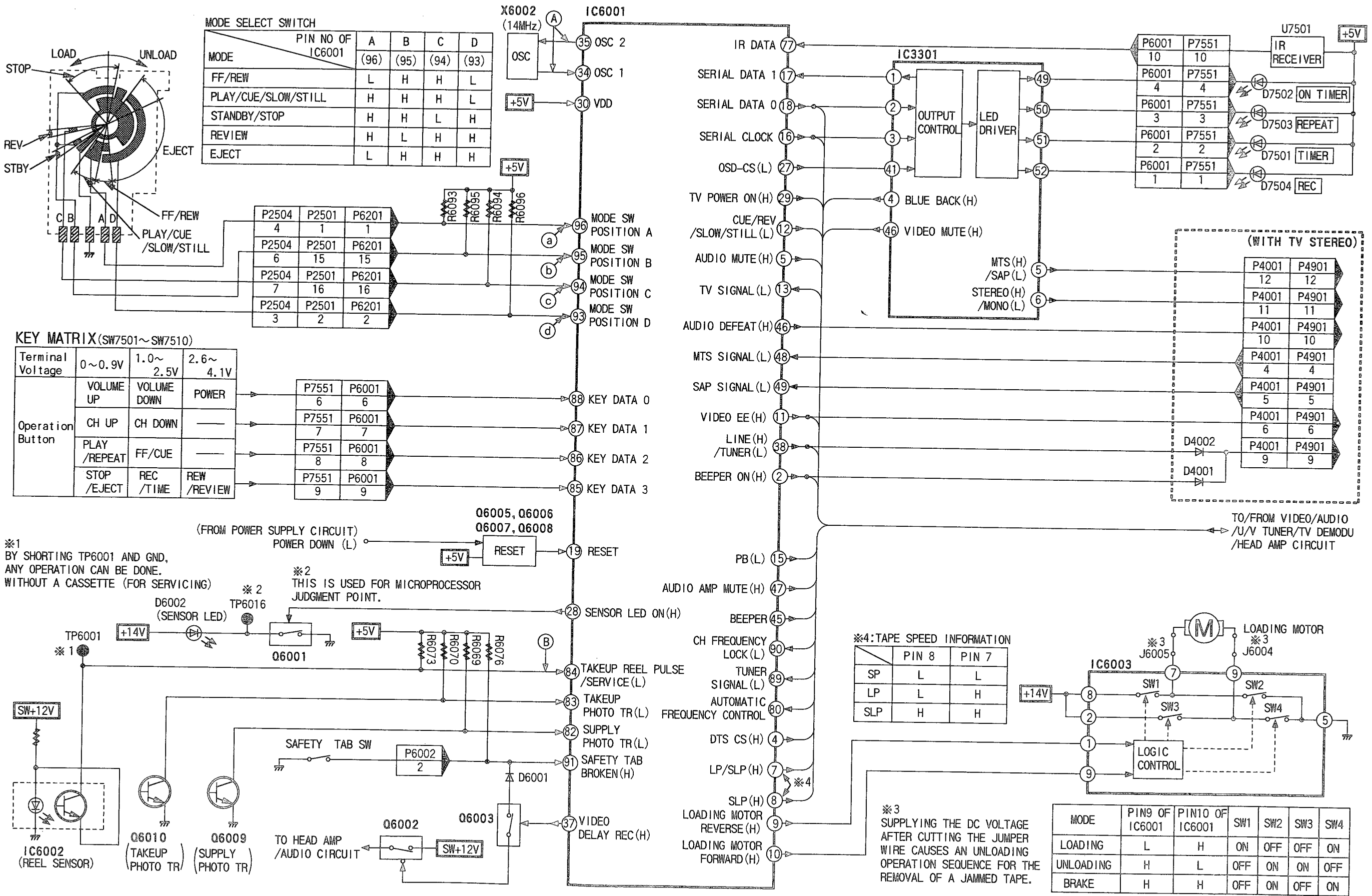


# VIDEO AMP/POWER AMP BLOCK DIAGRAM



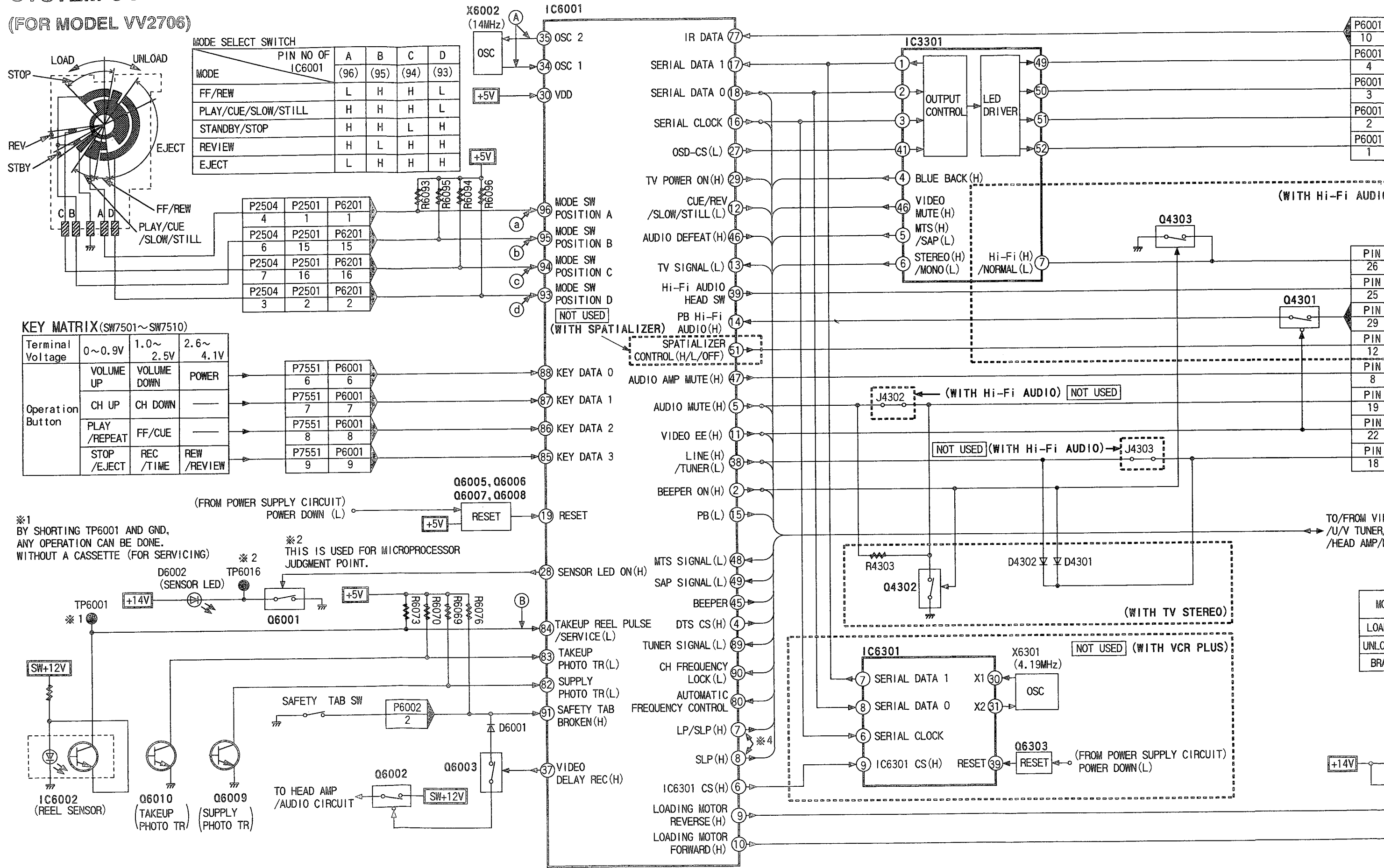
# SYSTEM CONTROL BLOCK DIAGRAM

(FOR MODELS PV-M1326/PV-M1326W/VV1306/VV1306B/VV1316W/PV-M1346/PV-M1356W/PV-M2036/VV2006/VV2016W/PV-M2046)



# SYSTEM CONTROL BLOCK DIAGRAM

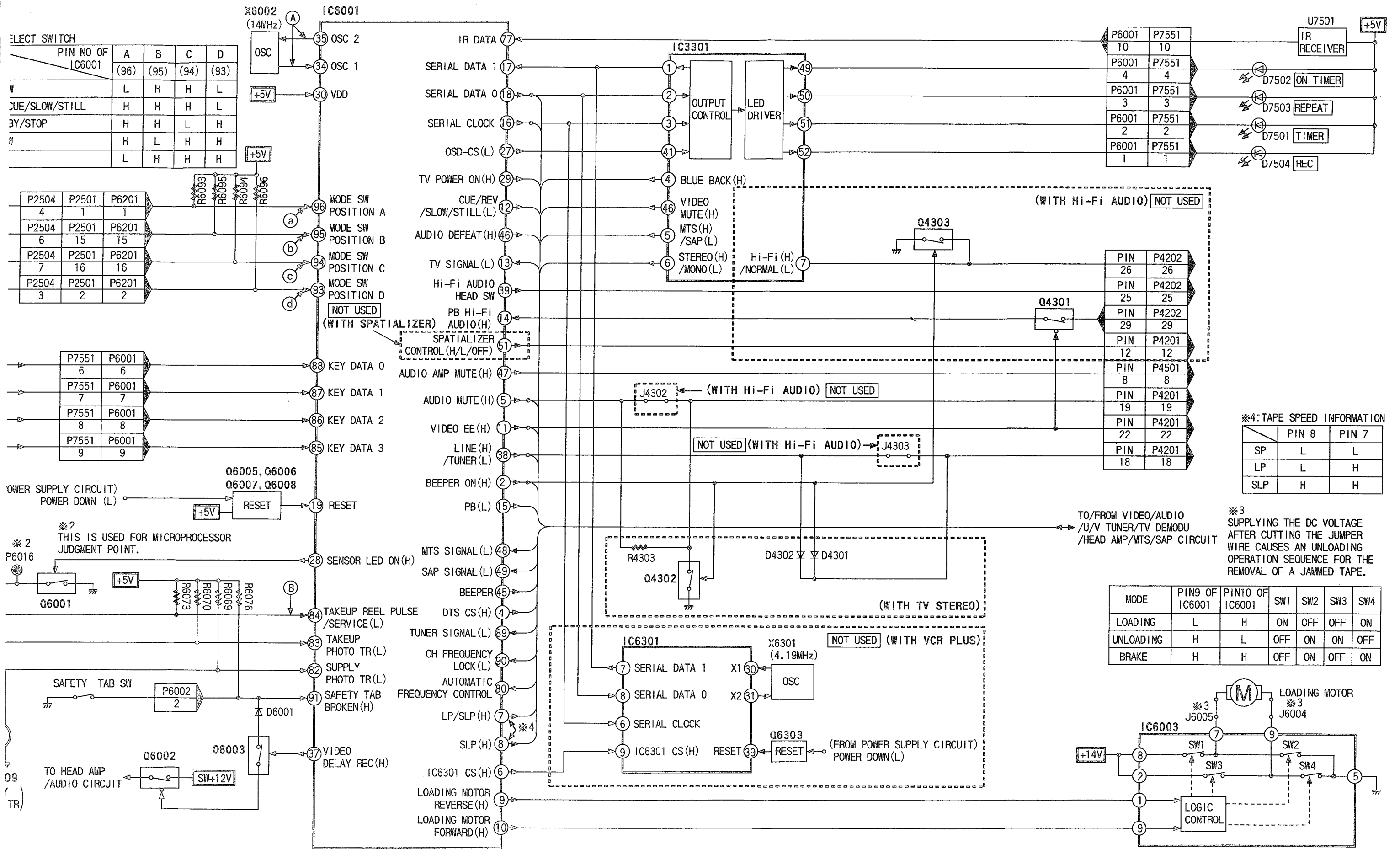
(FOR MODEL VV2706)



※1 BY SHORTING TP6001 AND GND, ANY OPERATION CAN BE DONE. WITHOUT A CASSETTE (FOR SERVICING)

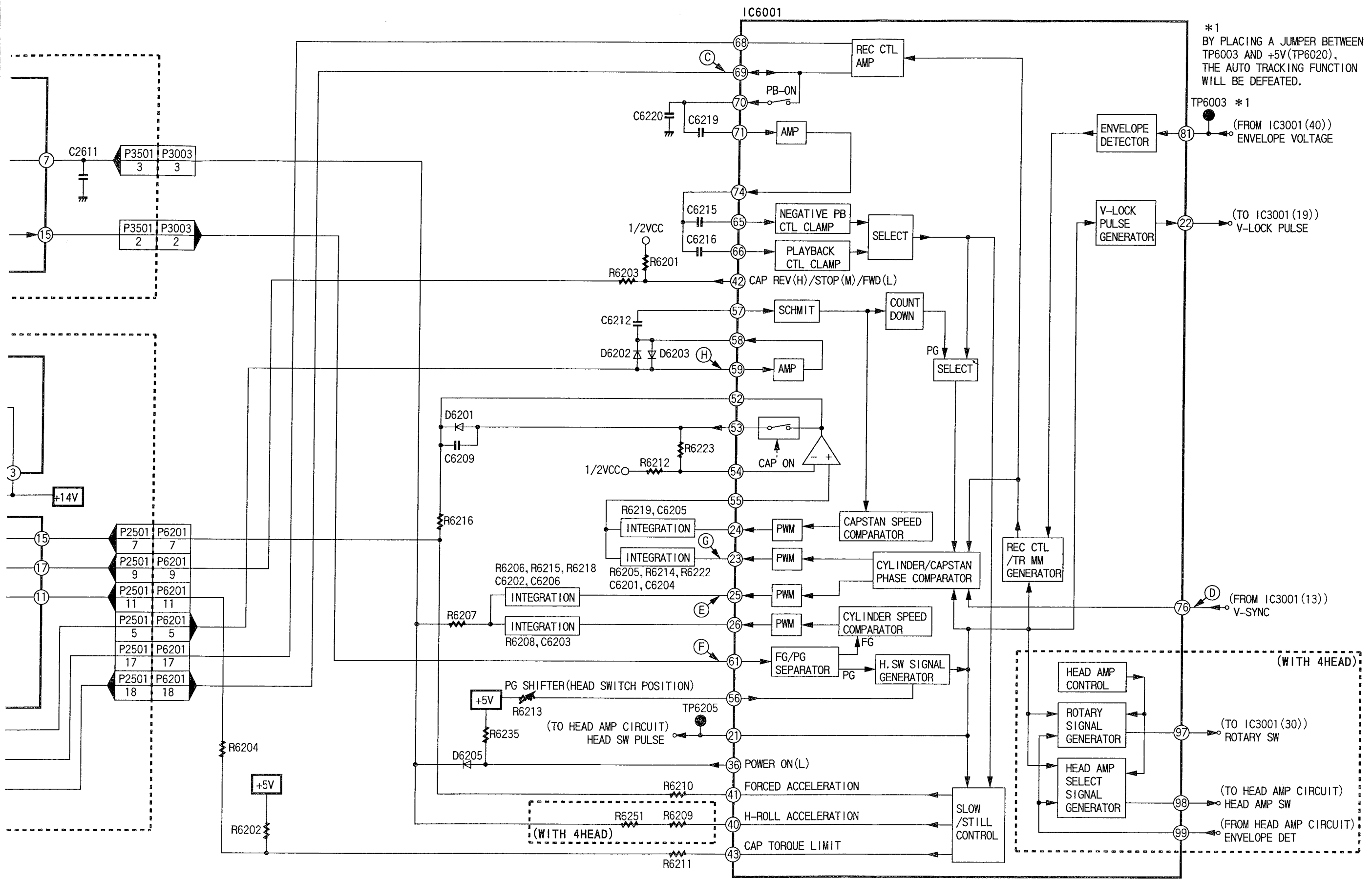
※2 THIS IS USED FOR MICROPROCESSOR JUDGMENT POINT.

# BLOCK DIAGRAM









\*1  
BY PLACING A JUMPER BETWEEN  
TP6003 AND +5V(TP6020),  
THE AUTO TRACKING FUNCTION  
WILL BE DEFEATED.

TP6003 \*1  
(FROM IC3001(40))  
ENVELOPE VOLTAGE

(TO IC3001(19))  
V-LOCK PULSE

(FROM IC3001(13))  
V-SYNC

(WITH 4HEAD)

(TO IC3001(30))  
ROTARY SW

(TO HEAD AMP CIRCUIT)  
HEAD AMP SW

(FROM HEAD AMP CIRCUIT)  
ENVELOPE DET

# WAVEFORM OF SYSTEM CONTROL AND SERVO STAGE

\*NOTE: Please use blank brackets to note additional information.

No	WAVEFORM	NOTE	No	WAVEFORM	NOTE	No	WAVEFORM	NOTE
(A)		14.32MHz	(B)		REC/P.B	(C)		REC CTL
(D)			(E)			(F)		
(G)			(H)		"F" = SP:1080Hz LP:540Hz SLP:360Hz			
(J)			(M)			(O)		
(K)			(N)			(P)		
(L)						(Q)		
(R)								
(S)								
(T)								
(U)								
(V)								
(W)								

# SYSTEM CONTROL AND SERVO CHECKING PROCEDURE

SYMPTOM	FLOW OF TROUBLESHOOT →					
Dead or Malfunctions	CHECK POINT	Pin 30 (VDD5V)	(A)	Pin 19 Normal(H)	Pin 16 (SCK)	(a) ~ (d) * NOTE2
	IF NO.	↓	↓	↓	↓	↓
	CHANGE	Power	X6002	Q6005, Q6006 Q6007, Q6008	IC6001	* NOTE1

\* NOTE1: Adjust Gear Phase.  
\* NOTE2: Check Power Supply circuit.

SYMPTOM	FLOW OF TROUBLESHOOT →					
NO PLAY	CHECK POINT	(a) ~ (d)	(F)	(B)		
	IF NO.	↓	↓	↓		
	CHANGE	* NOTE1	* NOTE2	* NOTE3		

\* NOTE1: Adjust Gear Phase.  
\* NOTE2: IC2601(Cylinder Drive) or Cylinder Unit.  
\* NOTE3: IC2501 or IC2502(Capstan Drive) or IC6002(Reel Sensor).

SYMPTOM	FLOW OF TROUBLESHOOT →					
Distorted Playback Pix(1) 	CHECK POINT	(D)	(F)	* NOTE3	* NOTE5	
	IF NO.	↓	↓	↓		
	CHANGE	* NOTE1	* NOTE2	* NOTE4		

\* NOTE1: Check Video circuit.  
\* NOTE2: IC2601(Cylinder Drive) or Cylinder Unit.  
\* NOTE3: Open pin 7 of IC2601 and apply external 2.5V DC to pin 7.  
\* NOTE4: If the picture is still the same, change IC2601 or Cylinder Unit.  
\* NOTE5: If the picture is improved, change IC6001.

SYMPTOM	FLOW OF TROUBLESHOOT →					
Distorted Playback Pix(2)  (Periodic Noise bar)	CHECK POINT	(C)	(H)	* NOTE3	* NOTE5	
	IF NO.	↓	↓	↓		
	CHANGE	* NOTE1	* NOTE2	* NOTE4		

\* NOTE1: Check tape travel and clean A/C head.  
\* NOTE2: Check FG head.  
\* NOTE3: Open pin 15 of IC2501 and apply external 2.5V DC to pin 15.  
\* NOTE4: If the picture is still the same, change IC2501, IC2502 or Capstan Motor.  
\* NOTE5: If the picture is improved, change IC6001.

# SYSTEM CONTROL AND SERVO CHECKING PROCEDURE

SYMPTOM	FLOW OF TROUBLESHOOT →						
Dead or Malfunctions	CHECK POINT	Pin 30 (VDD5V)	Ⓐ	Pin 19 Normal(H)	Pin 16 (SCK)	Ⓐ ~ Ⓓ	* NOTE2
	IF NO.	↓	↓	↓	↓	↓	
	CHANGE	Power	X6002	Q6005, Q6006 Q6007, Q6008	IC6001	* NOTE1	

\* NOTE1: Adjust Gear Phase.

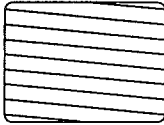
\* NOTE2: Check Power Supply circuit.

SYMPTOM	FLOW OF TROUBLESHOOT →						
NO PLAY	CHECK POINT	Ⓐ ~ Ⓓ	Ⓕ	Ⓑ			
	IF NO.	↓	↓	↓			
	CHANGE	* NOTE1	* NOTE2	* NOTE3			

\* NOTE1: Adjust Gear Phase.

\* NOTE2: IC2601(Cylinder Drive) or Cylinder Unit.

\* NOTE3: IC2501 or IC2502(Capstan Drive) or IC6002(Reel Sensor).

SYMPTOM	FLOW OF TROUBLESHOOT →						
Distorted Playback Pix(1) 	CHECK POINT	Ⓓ	Ⓕ	* NOTE3	* NOTE5		
	IF NO.	↓	↓	↓			
	CHANGE	* NOTE1	* NOTE2	* NOTE4			

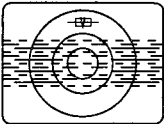
\* NOTE1: Check Video circuit.

\* NOTE2: IC2601(Cylinder Drive) or Cylinder Unit.

\* NOTE3: Open pin 7 of IC2601 and apply external 2.5V DC to pin 7.

\* NOTE4: If the picture is still the same, change IC2601 or Cylinder Unit.

\* NOTE5: If the picture is improved, change IC6001.

SYMPTOM	FLOW OF TROUBLESHOOT →						
Distorted Playback Pix(2)  (Periodic Noise bar)	CHECK POINT	Ⓒ	Ⓖ	* NOTE3	* NOTE5		
	IF NO.	↓	↓	↓			
	CHANGE	* NOTE1	* NOTE2	* NOTE4			

\* NOTE1: Check tape travel and clean A/C head.

\* NOTE2: Check FG head.

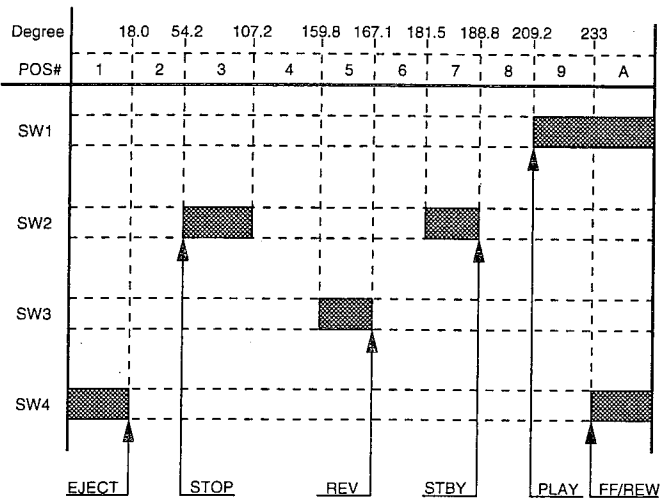
\* NOTE3: Open pin 15 of IC2501 and apply external 2.5V DC to pin 15.

\* NOTE4: If the picture is still the same, change IC2501, IC2502 or Capstan Motor.

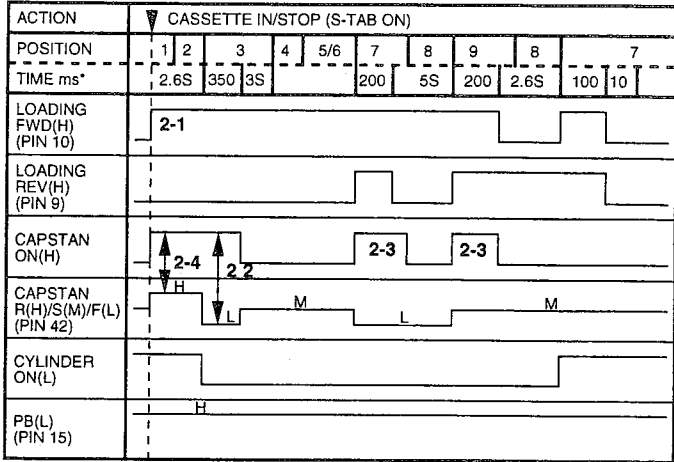
\* NOTE5: If the picture is improved, change IC6001.

# TIMING CHART

## BASIC OPERATION WITH MODE SELECT SWITCH



## TIMING CHART 2



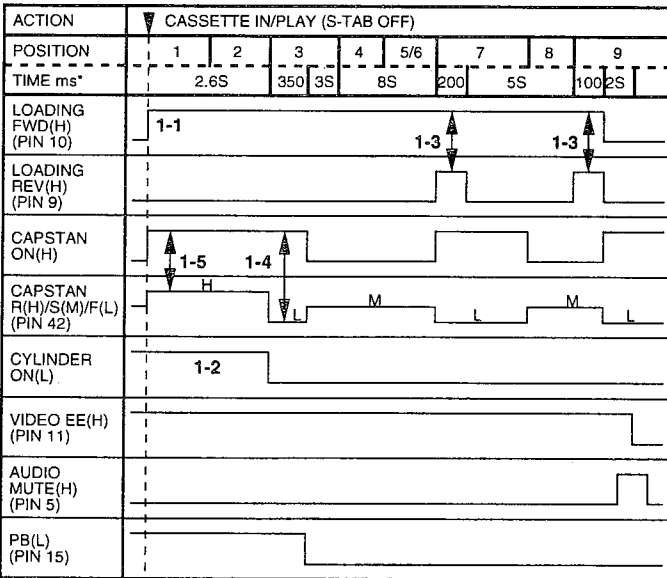
NOTE: 1) PIN NO. WITH BRACKET INDICATES PIN NO. OF IC6001.  
2) \*:IT SHOWS MAXIMUM TIME.

### MODE BY MODE OPERATION

#### 2. CASSETTE IN /STOP (WITH SAFETY TAB)

- 2-1. The Loading Motor starts rotation in a forward direction.
- 2-2. The Idler Gear swings over to Takeup Reel.
- 2-3. Takeup tape slack.
- 2-4. Supply Reel rotates until the cassette reaches the down position.

## TIMING CHART 1



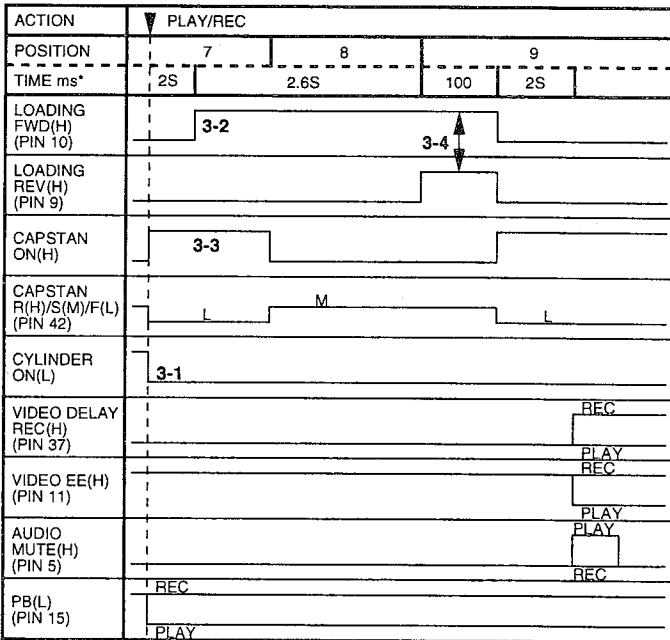
NOTE: 1) PIN NO. WITH BRACKET INDICATES PIN NO. OF IC6001.  
2) \*:IT SHOWS MAXIMUM TIME.

### MODE BY MODE OPERATION

#### 1. CASSETTE IN /PLAY (WITHOUT SAFETY TAB)

- 1-1. The Loading Motor starts rotation in a forward direction.
  - 1-2. The Cylinder starts rotation for quick play.
  - 1-3. The Loading Motor stops.
  - 1-4. The Idler Gear swings over to Takeup Reel.
  - 1-5. Supply Reel rotates until the cassette reaches the down position.
- (If the mechanism does not reach position 3 from position 1 within 2.6 seconds, the mechanism moves to position 1 to eject the tape. If the mechanism does not reach position 4 from position 3 within 3 seconds, the mechanism moves to position 1 to eject the tape. If the mechanism does not reach position 7 from position 4 within 8 seconds, the unit shuts off.)

## TIMING CHART 3



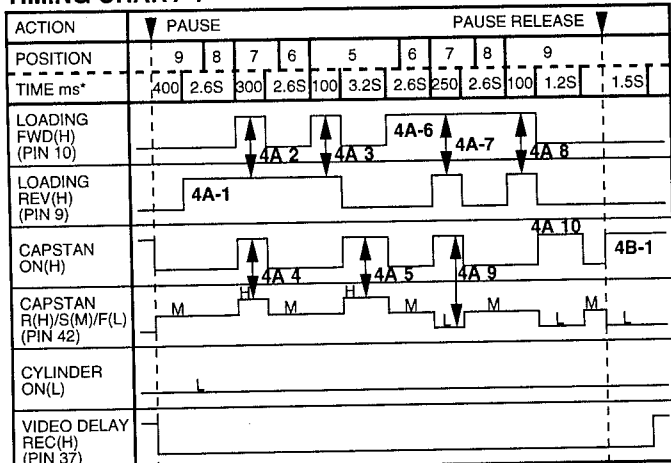
NOTE: 1) PIN NO. WITH BRACKET INDICATES PIN NO. OF IC6001.  
2) \*:IT SHOWS MAXIMUM TIME.

### MODE BY MODE OPERATION

#### 3. PLAY/REC

- 3-1. The Cylinder Motor starts rotation for quick play.
- 3-2. The Loading Motor starts rotation in a forward direction.
- 3-3. The Capstan Motor rotates in a forward direction to the Idler Gear swings over to Takeup Reel.
- 3-4. When the Mode Switch reaches position 9, the Loading Rev(H) signal goes HIGH to apply a brake to the Loading Motor. Then the Loading Motor stops quickly.

**TIMING CHART 4**



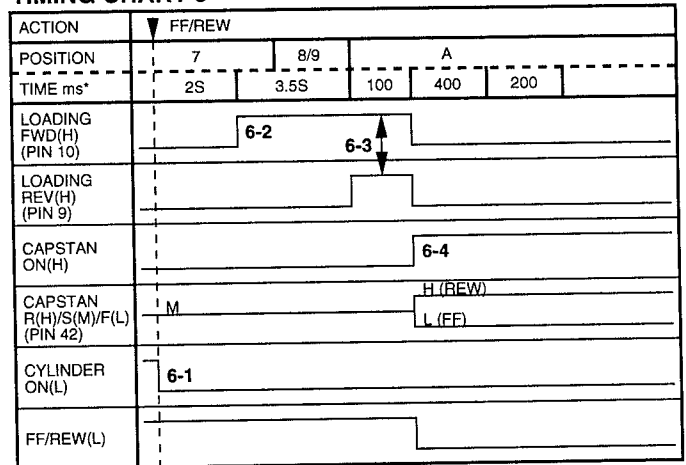
NOTE: 1) PIN NO. WITH BRACKET INDICATES PIN NO. OF IC6001.  
2) \*:IT SHOWS MAXIMUM TIME.

**MODE BY MODE OPERATION**

**4. REC TO REC PAUSE/REC PAUSE TO REC**

- 4A. REC TO REC PAUSE**  
 4A-1. Changes the mechanism position to 5(REV).  
 4A-2. Apply a brake to the Loading Motor.  
 4A-3.  
 4A-4. The Idler Gear swings over to Supply Reel.  
 4A-5. Rewind the tape for 3.2 sec(SP)/1.6 sec(LP)/1.06 sec(SLP).  
 4A-6. Changes the mechanism position to 9(PLAY POSITION).  
 4A-7. Apply a brake to the Loading Motor.  
 4A-8.  
 4A-9. The Idler Gear swings over to Takeup Reel.  
 4A-10. Playback the tape for 1.2 second to adjust add-on recording portion.  
**4B. REC PAUSE TO REC**  
 4B-1. The Capstan Motor starts rotation in forward direction for playback.  
 (The video recording will be activated with the Video Delay Rec(H) signal.)

**TIMING CHART 6**



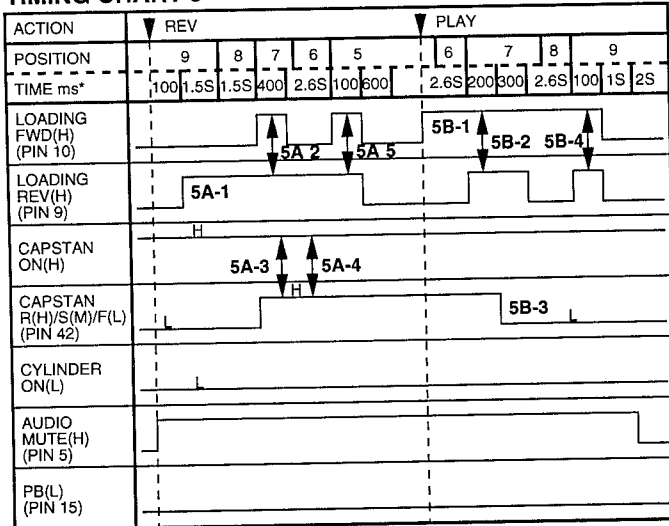
NOTE: 1) PIN NO. WITH BRACKET INDICATES PIN NO. OF IC6001.  
2) \*:IT SHOWS MAXIMUM TIME.

**MODE BY MODE OPERATION**

**6. STOP TO FF/REW**

- 6-1. The Cylinder Motor starts rotation.  
 6-2. Loading Motor starts rotation in a forward direction after Cylinder Motor rotation is stabilized.  
 6-3. When the Mode Switch reaches position A, the Loading Rev(H) signal goes HIGH to apply a brake to the Loading Motor. Then the Loading Motor stops quickly.  
 6-4. The Capstan Motor starts rotation for FF/REW. During FF/REW, the Cylinder keeps rotation to prevent a tape damage.

**TIMING CHART 5**



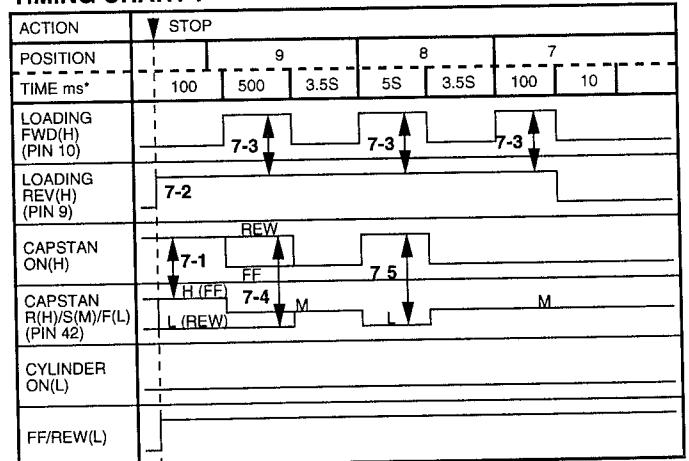
NOTE: 1) PIN NO. WITH BRACKET INDICATES PIN NO. OF IC6001.  
2) \*:IT SHOWS MAXIMUM TIME.

**MODE BY MODE OPERATION**

**5. REVIEW**

- 5A. PLAY TO REVIEW**  
 5A-1. The Loading Motor starts rotation in a reverse direction.  
 5A-2. The Loading Motor stops.  
 At this position, the Pressure Roller and the Tension Arm are released.  
 5A-3. The Idler Gear swings over to Supply Reel.  
 5A-4. Proper tape tension is maintained.  
 5A-5. The Loading Motor stops.  
 At this position, the Pressure Roller is applied to the Capstan Shaft.  
**5B. REVIEW TO PLAY**  
 5B-1. The Loading Motor starts rotation in a forward direction.  
 5B-2. Apply a brake to the Loading Motor.  
 5B-3. While the Loading Motor is stopped, the Capstan Motor changes its direction to forward.  
 5B-4. When the Mode Switch reaches position 9, the Loading Motor stops.

**TIMING CHART 7**



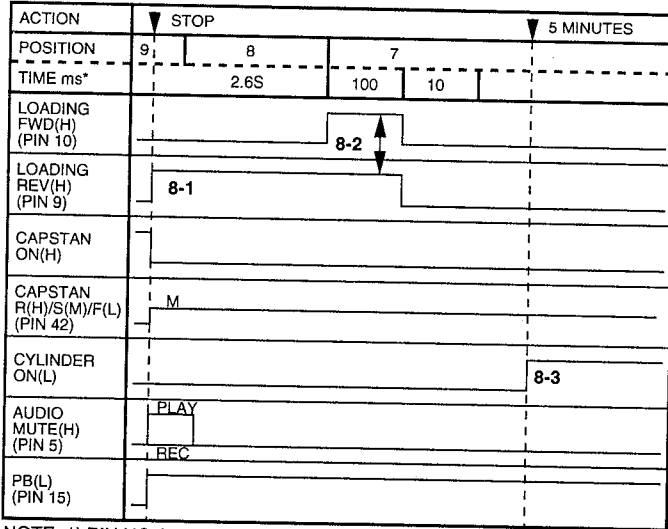
NOTE: 1) PIN NO. WITH BRACKET INDICATES PIN NO. OF IC6001.  
2) \*:IT SHOWS MAXIMUM TIME.

**MODE BY MODE OPERATION**

**7. FF/REW TO STOP**

- 7-1. (Without 0 search function:) Apply a brake to the Capstan Motor for quick stop.  
 (With 0 search function:) Tape forward or rewind to approximate 0 count position then apply a brake to stop.  
 7-2. The Loading Motor starts rotation in a reverse direction.  
 7-3. Apply a brake to the Loading Motor.  
 7-4. For rewind to stop operation, the Idler Gear swings over to the Takeup Reel.  
 7-5. (With 0 search function:) Forward to precise 0 count position within 5 seconds and stop.  
 (Without 0 search function:) Takeup tape slack for 200ms.

### TIMING CHART 8



NOTE: 1) PIN NO. WITH BRACKET INDICATES PIN NO. OF IC6001.  
2) \*:IT SHOWS MAXIMUM TIME.

#### MODE BY MODE OPERATION

##### 8. PLAY TO STOP/AFTER 10 MINUTES

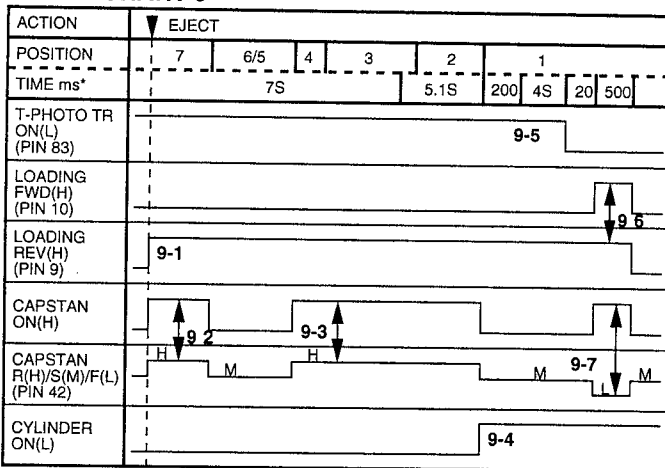
8-1. The Mechanism changes the position to 7(Stop).

8-2. The Loading Motor stops.

At this position, the Pressure Roller and the Tension Arm are released to reduce the tape tension.

8-3. After 5 minutes, the Cylinder stops.

### TIMING CHART 9



NOTE: 1) PIN NO. WITH BRACKET INDICATES PIN NO. OF IC6001.  
2) \*:IT SHOWS MAXIMUM TIME.

#### MODE BY MODE OPERATION

##### 9. STOP TO EJECT

9-1. Unloads the mechanism to the Eject position(1).

9-2. The Idler Gear swings over to Supply Reel.

9-3. The Capstan Motor rotates in reverse direction to takeup a tape slack.

9-4. When the Mode Switch reaches position 1, the Cylinder stops.

9-5. T-Photo Tr signal goes LOW at position 1.

If T-Photo Tr signal does not become LOW within 4 seconds at position 1, the mechanism moves to position 7.

If the mechanism does not reach position 3 within 2.6 seconds, or does not reach position 4 from position 3 within 3 seconds after that, the mechanism moves to position 1.

If T-photo Tr signal does not become Low within 4 seconds again, the unit shuts off.

(For Auto Eject operation, if T-photo Tr signal does not become Low within 4 seconds at position 1, the mechanism moves to position 3 and the unit shuts off.)

9-6. The Loading Motor stops.

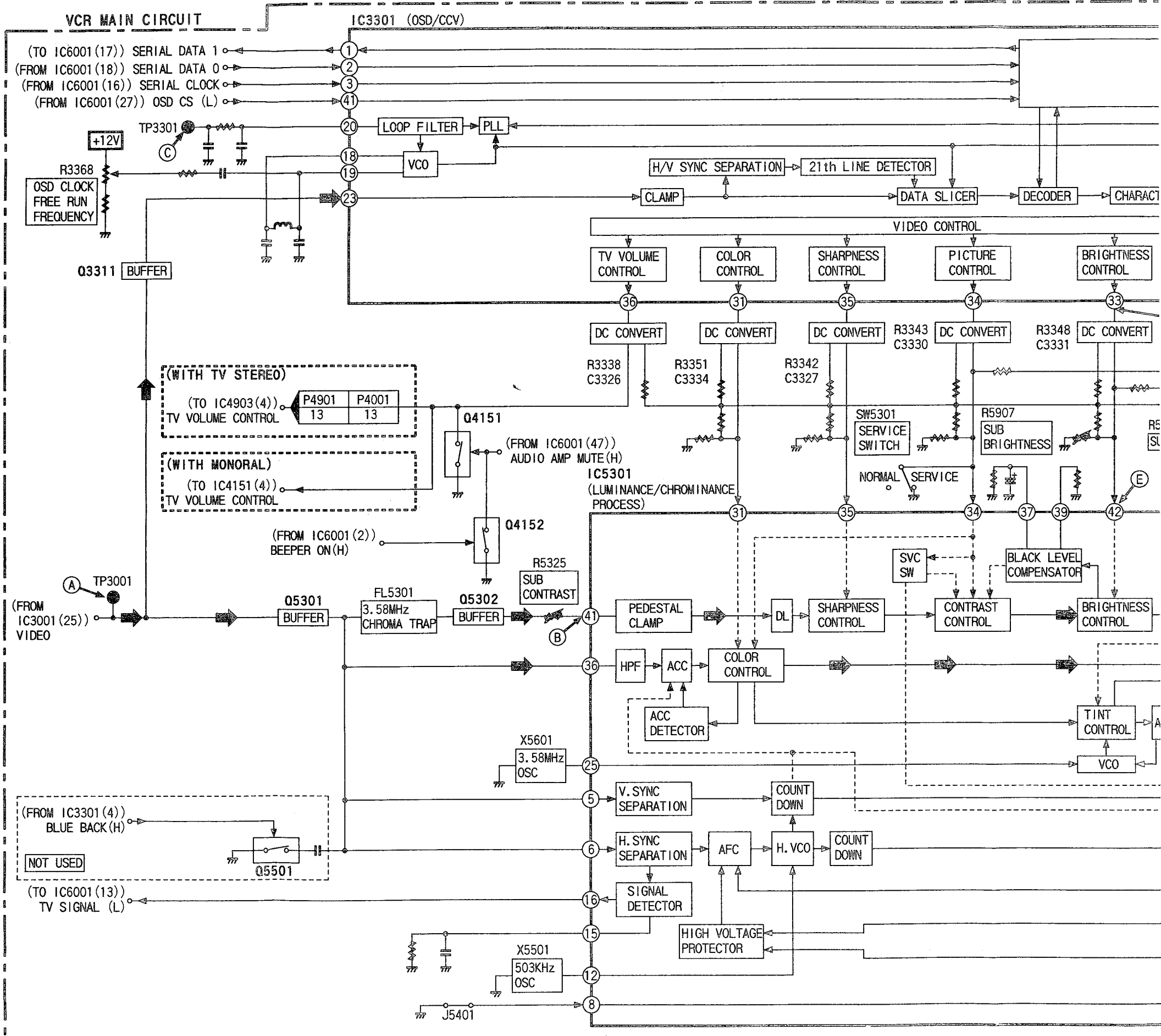
9-7. The Idler Gear is released from Supply Reel.

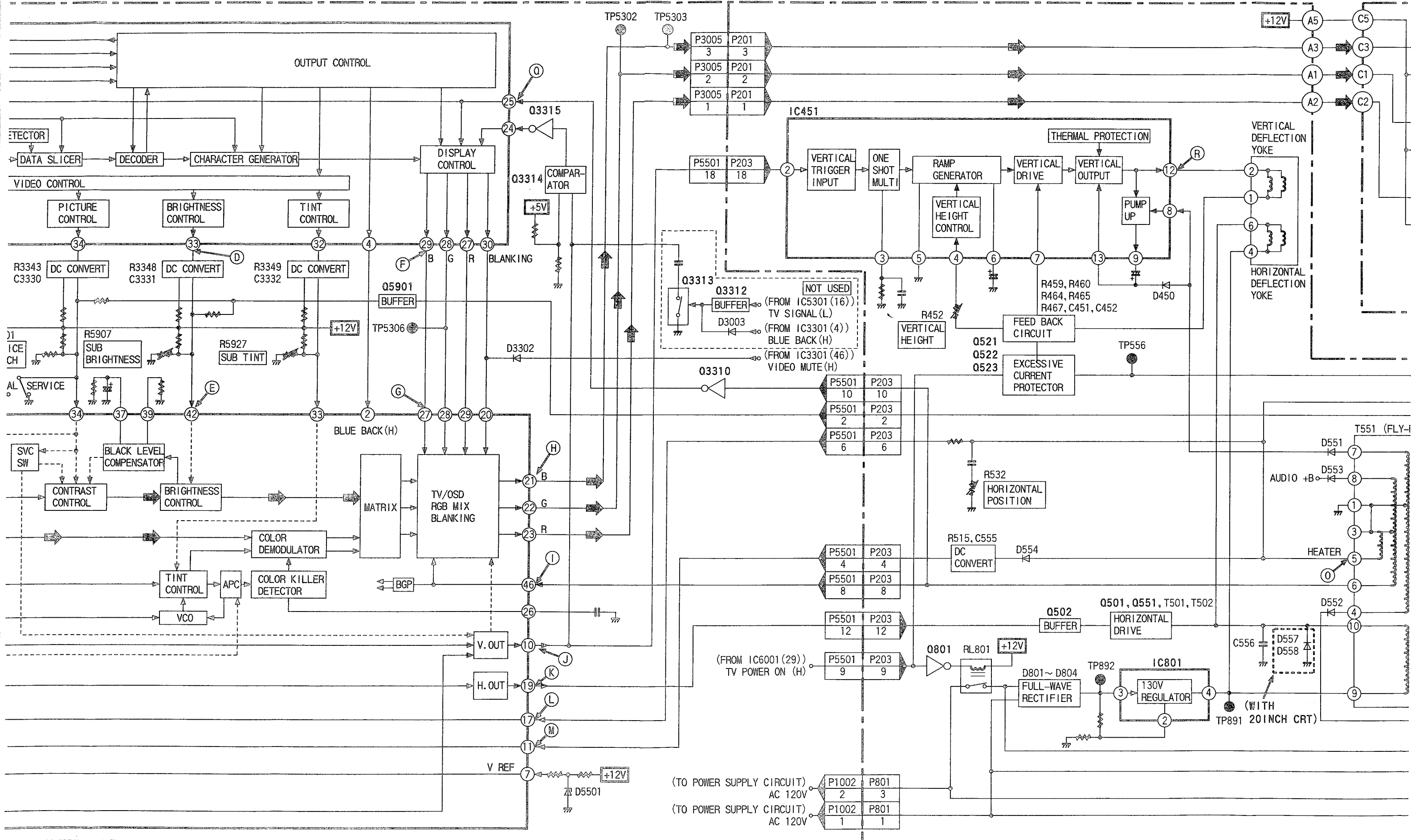
# WAVEFORM OF TV Y/C PROCESS /OSD/CCV/TV MAIN STAGE

\*NOTE: 1. The measurement mode of the waveforms in brackets on this chart is Record and Playback modes with NTSC color bar signal.  
2. Please use blank brackets to note additional information.

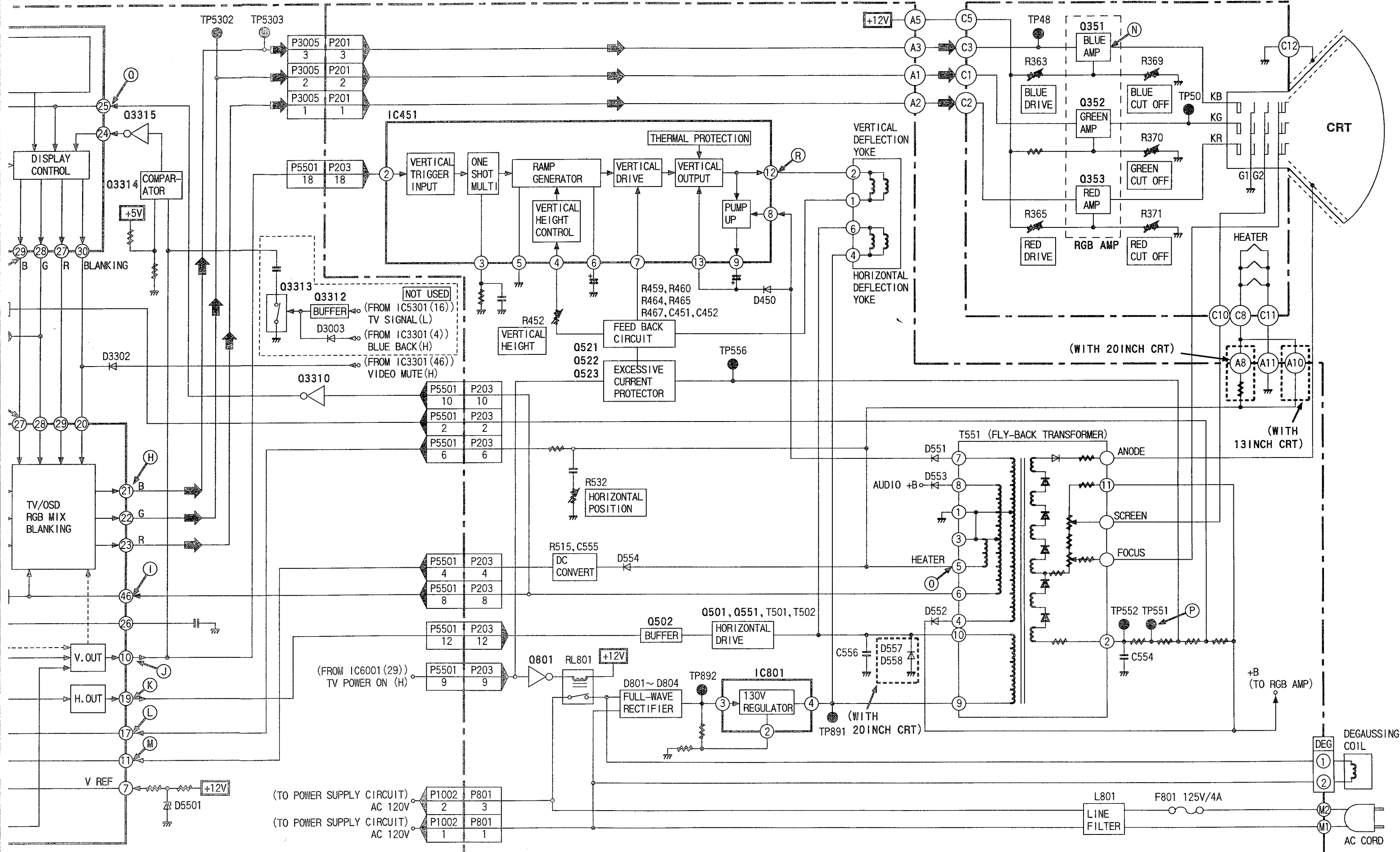
No	WAVEFORM	NOTE	No	WAVEFORM	NOTE
(A)		POWER ON	(B)		POWER ON
(C)			(D)		Duty will change according to video adjustment. (PWM)
(E)		Level will change according to video adjustment.	(F)		
(G)			(H)		
(I)			(J)		
(K)			(L)		
(M)			(N)		
(O)		POWER ON	(P)		13" CRT "A"=19.5Vp-p 20" CRT "A"=36.0Vp-p 27" CRT "A"=40.0Vp-p
(Q)			(R)		

# TV Y/C PROCESS/OSD/CCV/TV MAIN BLOCK DIAGRAM (FOR MODELS PV-M1326/PV-M1326W/VV130)





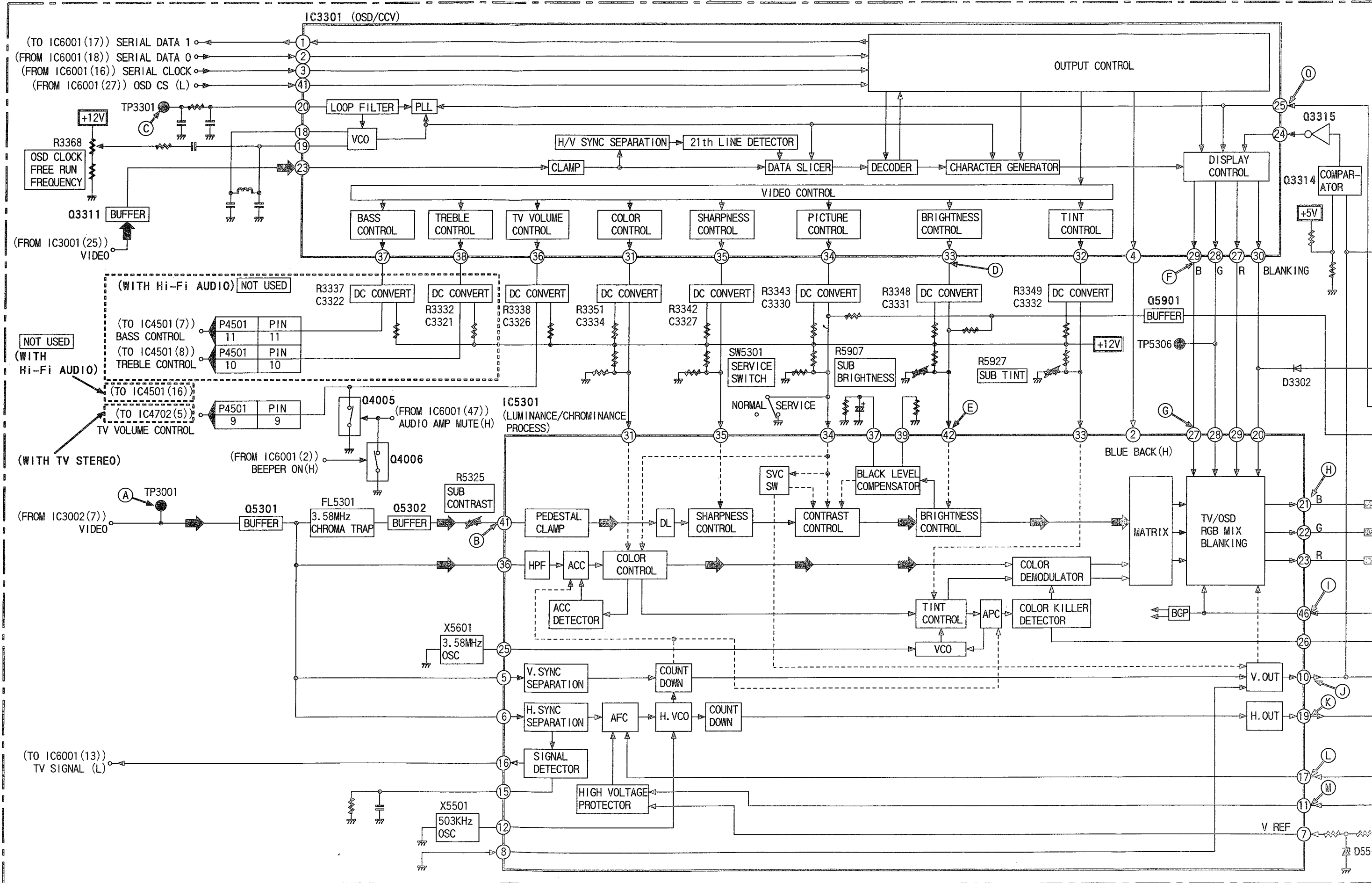




TV Y/C PROCESS/OSD/CCV/TV MAIN/TV AVR BLOCK DIAGRAM (FOR MODEL VV2706)

TV Y/C PROCESS/OSD/CCV CIRCUIT

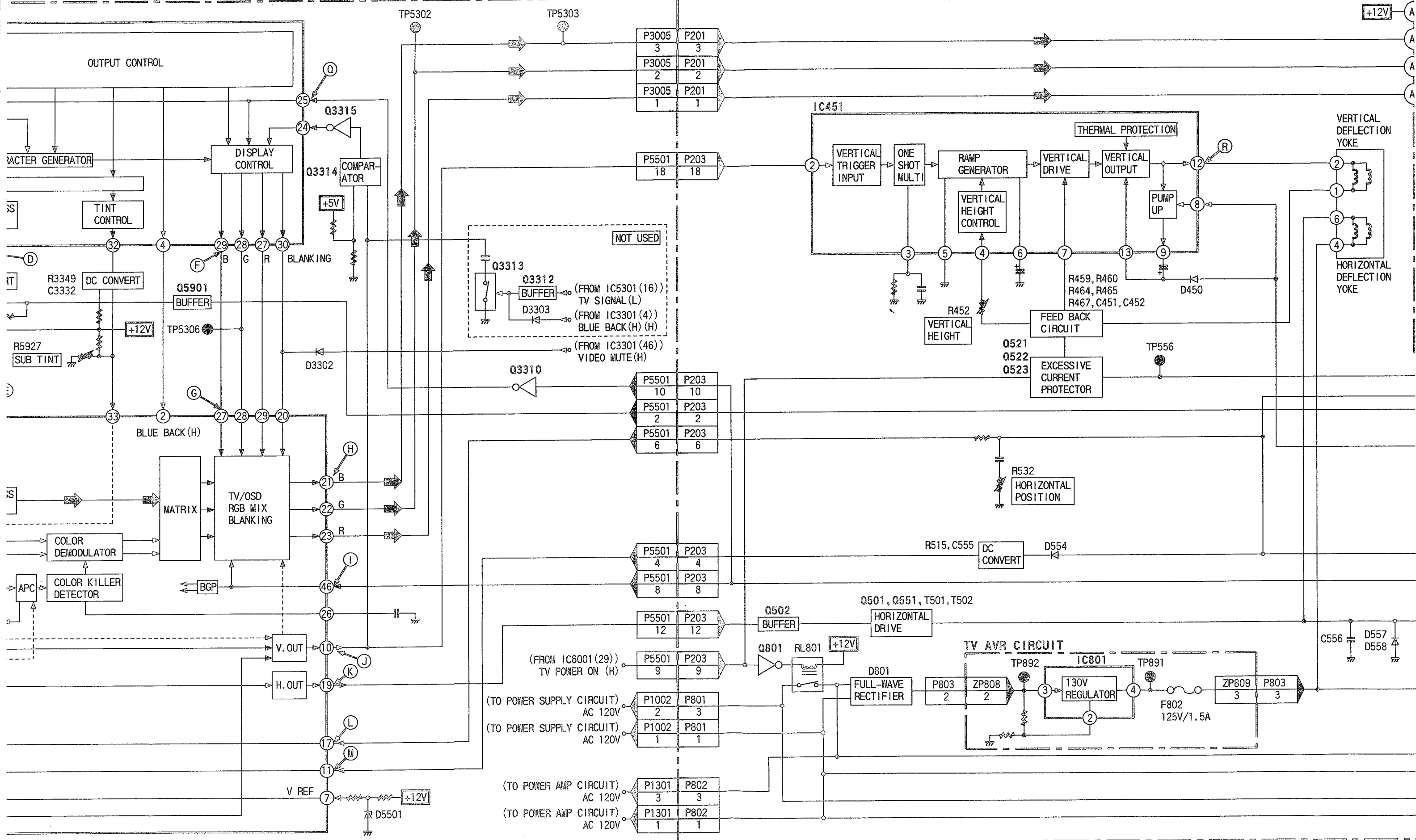
VIDEO SIGNAL

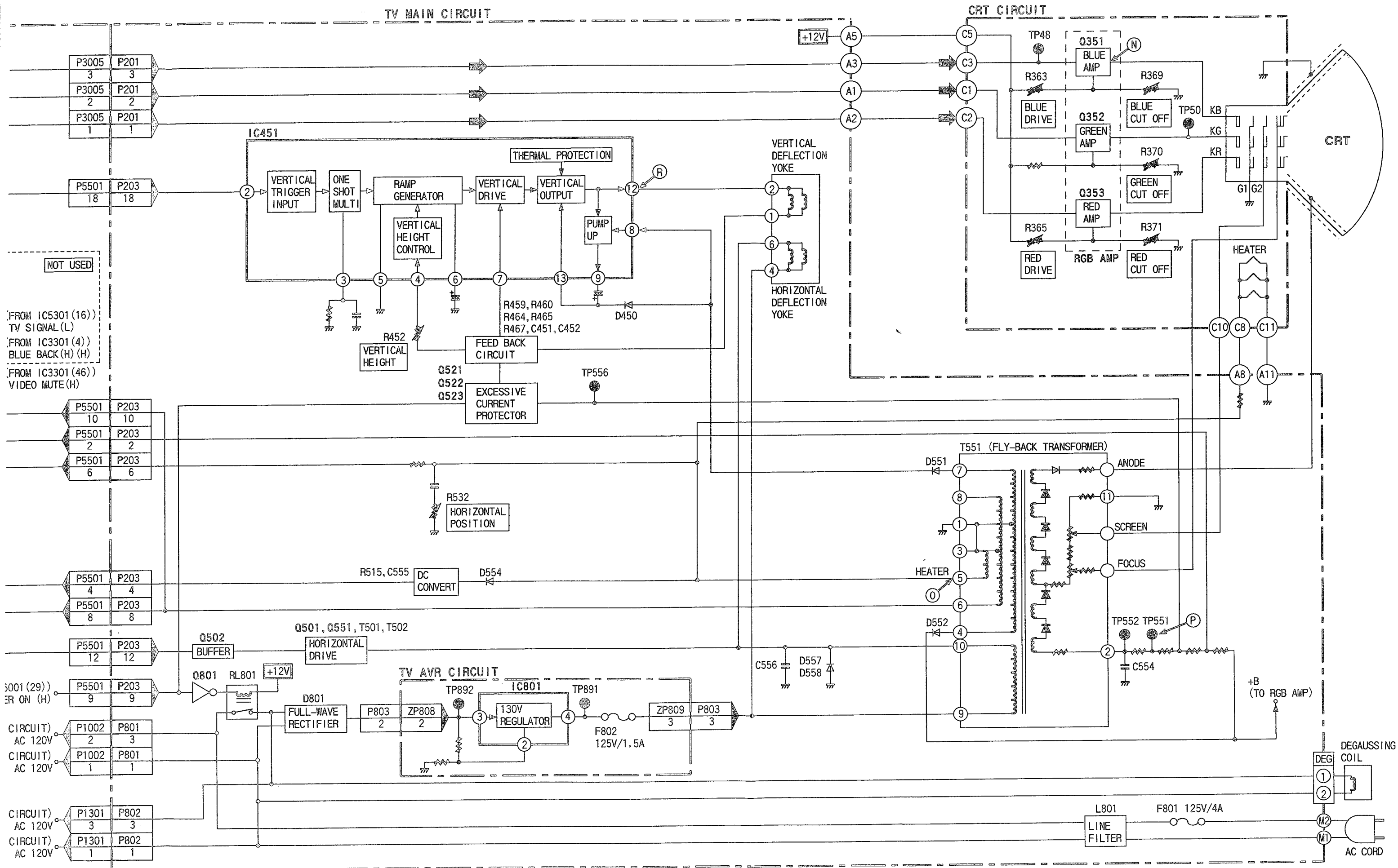


TV Y/C PROCESS/OSD/CCV CIRCUIT

VIDEO SIGNAL

TV MAIN CIRCUIT





**Panasonic®/Quasar®**  
**MATSUSHITA ELECTRIC**